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THYROTOMY; WITH REPORTS OF FOUR OPERATIONS.

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(Read before the Chicago Medical Society, December 4, 1876.)

The operation of thyrotomy was, so far as I am able to learn, first performed by Brauers, of Louvain, in 1833. I am unable to say with certainty how many times it has been performed since, but I find records of only fifty-nine cases. It is to be presumed that some have been published of which I have no knowledge. Dr. Morel Mackenzie, in 1873, knew of only forty-eight cases, which he tabulates with reference to date, operation, age, sex, symptoms, mortality, respiration, voice, recurrence or incomplete removal. As to result, he estimates: Complete success in 14.58 per cent.; partial success in 22.91 per cent.; deaths, 8.33 per cent.; severe dyspnœa, requiring cannula, 31.25 per cent.; severe dyspnœa, requiring fresh operation, 8.33 per cent. He found aphonia in 40 per cent.; dysphonia in 20 per cent.; modified voice in 11.11 per

cent.; not stated, but probably defective voice, 6.66 per cent.; recurrence or incomplete removal, 38.46 per cent. His conclusions are as follows:

"1. That the operation ought never to be performed for loss of voice alone.

"2. That in cases of cancer the operation is useless except where the growth is very small and distinctly circumscribed.

"3. That the operation should be confined to those cases in which there is danger to life from suffocation or dysphagia, and then only to be performed after an experienced laryngoscopist has pronounced it impossible to remove the growth *per vias naturales*." See his reply to Mr. Durham, London, 1873.

Mr. Durham had taken a much more hopeful view of the operation. He says:

"*First*—That the dangers and difficulties attending it are neither so numerous nor so considerable as have been represented and commonly supposed.

"*Second*—That the success hitherto achieved has been so marked and so indisputable as to justify and encourage in any such case as may seem appropriate, an earlier, bolder and more ready resort to this method than has hitherto prevailed."—55th vol. *Med. Chirurg. Trans., London*.

Of Mackenzie's forty-eight cases, nine were performed in America, namely: By Dr. Gurdon Buck, four cases; by Dr. Sands, one case; by Dr. Gouley, two cases; by Dr. Cohen, one case; by Dr. Cutter, one case.

Navratil, in a Vienna medical journal, published in 1875, reports twelve cases with good results. Three cases by this operator are included in Mackenzie's tables, and of these three one is reported aphonic and the other two dysphonic. In the paper referred to twelve cases are reported, and in all of them the voice was restored. I have not seen the original report, but a notice of it in the *Revue des Sciences Médicales*, Vol. IV., p. 638, Paris. Do the twelve cases reported in 1875 include the three in Mackenzie's paper? I assume that they do. In Mackenzie's table there is a case by Krishaber, in 1869, in which the voice is reported normal.

In the *Dictionnaire des Sciences Médicales*, under the article Larynx, Krishaber and Peter state that the voice is always extinct after the separation of the thyroid cartilages. In Krishaber's case, in Mackenzie's table, the voice is reported normal. The article in the *Dictionnaire* was published after the report of the case. I presume, therefore, we may infer that the voice did not remain normal. Of Navratil's twelve cases, in all of which he reports the voice restored, he says that two were able to sing. In the other cases, while the voice was restored, there was probably some defect either in flexibility or quality.

Dr. George M. Lofferts, of New York, reports a case of thyrotomy for the removal of both ventricles, which were prolapsed. The voice was not destroyed by the operation.—*Ann. des Mal. de l'Oreille et du Larynx*.

J. Bœckel performed the operation for removal of a tumor from the right ventricle, probably prolapse. The voice was not destroyed.—*Gazette Méd. de Strasbourg*.

Of the fifteen cases of which I have some knowledge since Mackenzie's table was published in 1873, only one has died. In thirteen the voice has been restored, or at least not destroyed.

Bœckel suggests that in operating for thyrotomy the head should be low, so that the blood will gravitate toward the mouth rather than toward the trachea. This suggestion seems to me to be worthy of consideration.

Among those who have written upon the subject there seems to be a wide difference of opinion as to the necessity, the methods, and the results of the operation. Some authorities insist that all, or nearly all, growths can and ought to be removed *per vias naturales*; others, with Mr. Durham, that thyrotomy should be resorted to more boldly and more readily.

It is insisted by some that the cricoid should never be divided; others assert that the separation of this cartilage gives rise to no inconvenience. Dr. Mackenzie and Mr. Durham do not by any means arrive at the same conclusions as to the results. Mr. Durham finds complete success in 51.35 per cent. of the cases analyzed; Dr. Mackenzie, from a study of the same histories, finds complete success in only 14.58 per cent.

Mr. Lennox Browne, in a communication read before the Medical Society of London, upon the treatment of non-malignant growths in the larynx, presented the following general propositions, which are of interest in connection with this subject:

"1. Attempts made to remove excrescences of the larynx by ablation are not as harmless as is generally supposed.

"2. The symptoms occasioned by benign tumors of the larynx are not marked enough to necessitate the use of instruments.

"3. Many of these growths are destroyed, or are reduced, by local treatment or appropriate general treatment, especially where they are recent.

"4. The reappearance of laryngeal tumors after their ablation by *per vias naturales*, is more frequent than one would suppose.

"5. The transformation of benign into malignant growths is a quite frequent result of attempts at extraction.

"6. The instruments more frequently used at the present day are much more dangerous than those formerly employed. They determine perichondritis by wounding the sound parts.

"7. As to extra laryngeal operations, they should be reserved for those cases where there is danger of asphyxia or dysphagia."

—*British Med. Journal*, May, 1875; from *Annales des Maladies de l'Oreille et du Larynx*, Aug., 1876.

The recorded cases in which the details and results are fully given are probably not yet sufficiently numerous to justify a positive judgment upon many of the questions involved.

As some contribution to the history and literature of this subject, I beg to submit to the Society reports of four operations of thyrotomy—the only ones, so far as I know, performed in Illinois. Two of these operations were upon the same patient; but the circumstances were such as to justify separate histories. These four, with the nine of Navratil, one by Loferts, and one by Boeckel, added to the forty-eight tabulated by Mackenzie, make in all sixty-three cases:

CASE I. George Mundie, aged ten years, of English parentage, was referred to me by Dr. E. P. Cook, of Mendota, Ill. I saw him first December 4, 1868. He was well grown for his age, and appeared healthy. His mother stated that he had been somewhat hoarse from infancy; had not been subject to croup, but for the last three years had been, with the exception of two short intervals, aphonic. Before the voice became extinct, three years ago, he took a bad cold, and coughed severely for five or six weeks. The loss of voice was gradual. About two years ago he again took a severe cold, and after three or four days the voice returned, and was quite natural for ten days, when it began to fail, and became entirely extinct as he recovered from his cold. About eight months ago the voice returned for a few days, while suffering from a severe cold, but was not natural in quality. Upon examination I found an uneven strawberry-like growth, of a bright rose color, between the anterior portion of the cords, and apparently attached beneath them. The posterior extremities of the cords were free. There was more difficulty in expiration than in inspiration. The case was kept under observation for some time, and repeated efforts made to remove the growth with the forceps, but without success. Repeated subsequent examinations confirmed the diagnosis of a tumor of considerable size located in the infra-glottic space. It could be thrown up between the cords by coughing, and would then be held there by the cords. There was constant difficulty of breathing, and attacks of great dyspnoea became quite frequent. Finding it impossible to remove it by the natural passages, as it would fall down and out of the reach of instruments upon each effort, while spasm of the larynx was easily provoked, I advised thyrotomy. The operation was agreed to, and a day set for its performance; but the little fellow in the meantime fell into the hands of a quack, who scouted the idea of a tumor and promised to cure him in three weeks. I did not see him again; but I advised my friend, Dr. Cook, who had in the meantime acquired a facility in the use of the laryngoscope, and who had taken much interest in the case, to be prepared to perform tracheotomy if neces-

sary, as I feared it soon would be, and suggested that in that event, if the parents would consent to it, he open the larynx and remove the tumor.

In December, 1870, I received from the doctor a letter, of which the following is a copy:

"MENDOTA, ILL., December 16, 1870.

"H. A. JOHNSON, M.D.: *Dear Sir*—I have no doubt you remember, and that it will give you pleasure to hear from your former patient, Master G—— M——. I performed the operation of thyrotomy in his case seven days since. He is doing finely. There proved to be a double mass of nearly equal size, with a common pedicle, or I might say neither strictly pedunculated nor sessile; the upper mass nearly spheroid in shape half inch in diameter; the lower, and which was with difficulty seen by the laryngoscope, oblong and flattened—greatest diameter five-eighths of an inch. Nothing could more perfectly resemble a diminutive cauliflower. Of its benignancy I hope there can be no question. The operation was not very difficult, but required more than two hours' time. External incision two and a half inches long, from a little above the hyoid bone to below the cricoid cartilage, but kept clear of the isthmus of the thyroid body, and did not expose the rings of the trachea, as a precautionary step, in view of the possible necessity for the introduction of the tube. Made the external incision a little to one side of the median line, and dissected down obliquely to the larynx, etc. Thus, upon closing the external wound, had more tissues upon the one side, and by that means steadied the thyroid cartilage and perfectly controlled the over-riding of the one section upon the other. But I need not go into particulars, as they are no doubt more familiar to you than to me. I expect in a few days to have a laryngoscopic view of the parts.

"I am, yours truly,

E. P. COOK."

I have heard from this case repeatedly since; and in June, 1874—more than three and a half years after the operation—Dr. Cook told me that there had been no return of laryngeal trouble, and that the voice was quite natural. This, so far as

I know, is the first case of thyrotomy performed west of Philadelphia and New York.

The following case was for some weeks under my care, and I made repeated efforts to destroy the growth by the galvano-cautery. After one of the applications he became frightened, and I did not see him again until the operation for thyrotomy. From Dr. E. Bert, of this city, who performed the operation, I have the following statement :

“CHICAGO, November 27, 1876.

“DR. H. A. JOHNSON, CITY: *Dear Doctor*—I copy from my memorandum of the case: Carl Moll, forty-five years of age (1874), merchant tailor. Never sick before; first symptoms of tumor-laryngis May, 1873; slight irritation in swallowing, particularly of dry substances; beginning hoarseness at same time. During the summer of 1873 his symptoms gradually increased in intensity, until in autumn complete aphonia set in. The pains appear at the same place—on the left side of os hyoid and underneath—radiating often, and mainly at nights, toward left ear. Pain increased while swallowing, sometimes so intense that patient refuses to eat.

“*Coughed* very little in the beginning of the disease; now of a dry and hacking character, accompanied quite recently by pain. Expectoration, of a slimy and salivary character, quite copious.

“*Alteration* of voice has been almost his first symptom. Up to the middle of last winter it was sometimes better than at others; since about six months it has failed almost completely.

“*Dyspnœa* begins to appear now, and alarms patient more than anything else. The copious collection of mucus forces him to spit quite often, and at such times he cannot breathe quite freely. In the month of June (1874) there was quite an inflammatory swelling, caused by the continued use of the galvano-cautery, and then he was suffering from dyspnœa more than even now (November, 1874). He is able to relieve himself from the trouble of dyspnœa, by rolling over to his right side, which seems to indicate the mobility of the tumor.

"Dysphagia. Patient is able to swallow all kinds and form of nourishment. The act of swallowing is painful, and followed by an attack of cough generally, by which small masses of edibles are thrown back. This symptom is varying at different times.

"Pain has existed from the beginning, and was of a constant, dull character. He thought "he could cough out the foreign substance." Pain has gradually increased in intensity, it being unusually sharp now. It is confined to the left side of the os hyoid, and extends upward to the left ear, which is sometimes the principal seat of complaint, particularly at nights.

"June, July and August all possible alteratives were applied, and finally galvanic treatment was instituted.

"November 19, 1874. Great emaciation during eight days; loss of strength; eats almost nothing. The tumor very much swollen; a small ulceration to be seen on left half of epiglottis. Sputa very copious, partly of a bad odor. *Wants* operation at all hazards. Low tracheotomy performed November 20, 1874.

"Thyrotomy was performed November 22, 1874, the cartilage being very resistant; there was considerable difficulty in splitting it open. Another trouble was the lack of a convenient instrument to keep both halves of the cartilage and larynx apart. The tumor was seized with a strong vusella and twisted a number of times around its small base, from which it protruded downward over one and a half inches in the shape of a pear. There was little hæmorrhage. The base of the tumor was strongly touched with perchloride of iron. The patient had a kind of fainting spell soon after the operation, but rallied from it soon with the aid of beef tea and stimulants. He was able to read and write about an hour and a half afterward, and whispered without any pain; could be easily understood. Every possible precaution as regards temperature of room and ventilation and nourishment was very strictly taken; the most accurate scrutiny would fail in finding any omission. The wound seemed to do well. Cleaning the cannula could be done without any trouble; scarcely any

fever, no symptoms of pyæmia, gangrene, pneumonia, etc. He continued to do well, and the most sanguine expectations about his final and speedy recovery seemed justified. November 25, 10 p. m., he was in good spirits, not complaining of anything, except he sat up and wrote on a slip of paper: My head feels very sore. At 2 a. m. he was seen, and talked a few words quite intelligently. At 4 a. m., November 26, 1875, he expired, a few moments after he had been watched and found well, without any struggle.

"A *post-mortem* examination made of the larynx failed to discover any local *causa mortis*. The wound was in a good condition, no gangrenous appearance or (diphtheric?) exudation, no signs of hæmorrhage."

CASE III. Viola Franks, female, aged six and a half years, was brought to me by her mother, in the fall of 1873. She had whooping cough in the winter of 1872-3, and as she recovered from it her voice began to be hoarse and finally became extinct. At the time of consultation she was apparently in good health, with the exception of a slight cough and the aphonia, with occasional paroxysms of dyspnœa. Her appetite was fair, and she was well nourished. She was bright and cheerful, her cheeks ruddy and her lips red. Upon examination I found the epiglottis narrow and rolled like a dried leaf; it was dependent, and covered over the entrance to the larynx so that I could not see the vocal cords. The color of the parts, so far as I could observe them, was normal.

During the winter of 1873-4 I saw her several times, but could never see the glottis. Her general health failed a little, and in the spring became decidedly impaired. She was placed upon tonics, which for a while seemed to benefit her; but in the early summer of 1874 dyspnœa, both upon inspiration and expiration, became constant, with frequent spasms of the glottis. She was emaciated, pale, appetite poor, and all the symptoms so alarming, that on the fifth of July I performed high tracheotomy. She immediately began to improve, and gained in flesh and strength. Early in September she again began to fail; the appetite was poor, and there was difficulty

in swallowing, apparently from pressure upon the œsophagus. So far I had not been able to see below the glottis, and only occasionally to get a glimpse of the vocal cords. The epiglottis rested back, covering in the laryngeal cavity, and it was only by an effort at coughing that it would be thrown up. She would not tolerate in the pharynx the presence of a hook, so that I could not raise it. From the fact that there was no sufficient cause for the dyspnœa above the cords, and especially no impediment above them to expiration, and from the fact that there was no mechanical obstruction below the cricoid, I was confirmed in the opinion which I had previously held, that there was a tumor in the infra-glottic space of such size as to mechanically obstruct the passage of air. The dysphagia seemed to be caused by pressure of the tumor upon the parts posterior to the larynx.

September 27, 1874, with the assistance of Drs. Norcom and Sherman, I performed thyrotomy, dividing the soft parts in the median line, opening the larynx through the crico-thyroid membrane, introducing a grooved director upwards and between the vocal cords, and then dividing the cartilage. Upon separating the parts I found a tumor completely filling the space below the glottic chink and attached to the walls upon the right side of the space. The attachment was large, and its thorough removal somewhat difficult, as it extended below the superior border of the cricoid and up to the right cord. In order to make the removal as thorough as possible, I divided the cricoid cartilage. The growth was removed partly with the forceps and partly with a pair of sharply curved scissors. There was considerable hæmorrhage, which was controlled by the application of a solution of persulphate of iron. The base was canterized with nitrate of silver, and the parts brought together. There seemed to be no tendency to displacement, and I simply closed the soft parts with two interrupted sutures, and supported them with strips of adhesive plaster. The operation was well borne, and was followed by very little fever or discomfort. In a few days she was up and around the house, and soon recovered her general health. The cannula was however allowed to remain.

The tumor was irregular in shape, of a cauliflower appearance, and about five-eighths of an inch in its transverse diameter, and extending from the vocal cords down to the lower border of the cricoid cartilage. It was soft, and easily broke down under the instruments. A microscopic examination was made, and it was found to consist of epithelial cells with in its interior a basis of connective tissue and blood-vessels. The larger portion of it, however, was made up of rounded or flattened epithelial cells and those not confined to its exterior. It evidently belonged, I think, to the epitheliomas, although upon its surface it presented the ordinary appearance of papilloma in the larynx. She breathed easily through the larynx, and for some weeks I hoped the operation would be followed by complete recovery. She was able to speak aloud, but with difficulty, as I was told; I did not hear her.

In about six weeks her mother thought she did not breathe quite as easily through the larynx; and upon examination, December 1, 1874, I found that she could not breathe at all through the larynx. The tumor was evidently reproduced. Her general health was, however, fair, and continued good during the winter of 1874-5. Portions of the growth came down so that they could be reached through the opening in the trachea, and were removed for examination. The microscopic characters were the same as those of the tumor.

In Dr. Mackenzie's paper, in reply to Mr. Durham, he says: "In all instances where thyrotomy has been performed afresh, the original wound having completely healed up, the operation has been considered as a new case." In my little patient the original wound had completely healed in a very short time after the operation. The respiration through the larynx was good, and the voice had been partially restored. The case was unsuccessful, however, as recurrence took place. In accordance with Dr. Mackenzie's rule, it should now be treated as a new case.

CASE IV. The patient continued in fair health during the spring of 1875, but in the early summer began to lose flesh, became pale and anæmic. There began to be some dys-

phagia, and I determined to repeat the operation. On the 29th of July, 1875, assisted by Drs. Norcom, Freer and Andrews, I again performed thyrotomy, dividing both cartilages from below upwards, having passed a director between the vocal cords before completing the section of the thyroid. The parts were separated, and held apart by two double hooks.

The tumor, upon opening the larynx, immediately protruded through the wound, presenting the appearance of a cauliflower of a pinkish color. The attachment was the same as in the former operation, but somewhat more extensive, reaching further to the left of the median line. The growth was larger than that removed in the previous operation, and was evidently producing a good deal of pressure upon the walls of the larynx. It was carefully and thoroughly detached, and the base touched with strong nitric acid. The section was found to have been made exactly in the median line, between the anterior attachments of the cords, and they were both uninjured and normal throughout their entire extent.

The operation was followed by almost no fever, or any untoward symptom. Even the next day she sat up, and had a fair appetite; swallowed well; and in a week she was out of the house, and the wound had almost entirely healed. As in the former case, she continued to wear the tube in the trachea. From this time on her general health was good, and she breathed easily through the larynx. The inner as well as the outer tube was fenestrated, and she wore a cork much of the time in the cannula.

In March, 1876, eight months after the operation, she began to speak aloud, and for the first time I heard her voice. I removed the tube, as I found no evidence of a recurrence. From that time to the present—December 4, 1876—her general health has been good. She has been in school during the summer and fall, and habitually speaks in a clear, ringing tone. I find that the voice has a good degree of flexibility, and she has been, during the fall, taking lessons in singing.

The opening in which the cannula was worn is still not quite closed; and for the last few weeks I have touched the parts with solid nitrate of silver. The skin seems to be

inverted, keeping the free edges a little apart. There is no purulent discharge from it, only at times a little mucus appearing at the point. It seems now to be rapidly closing.

During the last few months I have repeatedly seen the vocal cords in the laryngeal mirror. They are upon the same plane, normal in color, and smooth and entire throughout their whole extent, with the exception of a very slight roughness near the anterior attachment of the left. The epiglottis is more erect, and the examination is not difficult. It is perhaps too soon to pronounce positively as to a recurrence; but the case seems to be a complete success. The patient was present and was examined by the members of the society. A portion of the tumor with a microscopic section was also exhibited.

CHICAGO, December 4, 1876.

INSOMNIA : ITS CAUSES AND TREATMENT.

By J. SUYDAM KNOX, M.D.

(Read before the Chicago Medical Society.)

It is undoubtedly true, though we have no direct evidence to that effect, that in the human body functional life means structural death. Muscular force, nerve energy and glandular activity imply molecular disintegration. It is also equally true that, supplementing this waste, there is a constant and corresponding repair. Alternately waste or repair may be in excess; but a mean equilibrium is preserved. This equilibrium is health. Continued excess in either direction is disease.

Now, nutrition being constant, repair will be greatest during periods of the least activity. Taking the amount of the absorption of oxygen and excretion of carbonic acid as a measure of tissue waste, we find that during digestion, muscular exertion, or mental activity, these amounts are greatly increased; during rest both are diminished, and during sleep both are at a minimum.

Sleep, then, is the normal period of greatest repair. As during the waking hours waste exceeds the nutrition, so during sleep repair exceeds disintegration. Sleep, then, is neces-

sary to maintain the equilibrium between integration and disintegration. When development is superadded to nutrition, as in infancy and growing childhood, sleep is prolonged. On the other hand, in old age, when, with decreasing functional activities, progressive decay is overshadowing nutrition, sleep is shortened. The necessity of sleep, therefore, to maintain physical vigor is apparent without argument. And when insomnia, as a resultant, is added to the rapid disintegration and consequent exhaustion of disease, it requires no logic to impress the gravity of this complication upon the physician.

To understand how best to combat insomnia, it is necessary to know the phenomena of healthy sleep. As far as our subjective knowledge goes, during healthy sleep we observe that the brain is in a condition of partial or absolute repose. There is an absence of all voluntary exertion; and though exertion is possible to change a painful position or avoid a cause of irritation, it is made unconsciously, and without awakening; sensibility is blunted, and the special senses inactive; from absence of all voluntary muscular effort, frequency of pulse and blood pressure are diminished, though not more so than during complete repose without sleep. We thus see that sleep is a condition of the nervous system. It is a corroborative fact, that while muscular exhaustion can be overcome by simple rest, nervous exhaustion can only be recuperated by sleep.

Two opposite theories have been advanced to account for the immediate cause of sleep. One attributes it to venous congestion, or increased blood pressure in the brain. This theory is at fault, however, in this respect: that compression of the brain gives rise to stupor or coma, with absolute loss of intellectual power. There is no consciousness, no dreams, no sensibility; in nothing resembling healthy sleep. The other theory originated in the researches of Durham in 1860. Trephining the skulls of dogs, in each case a piece of bone was removed, and a watch glass carefully cemented in its place. In this way the condition of the surface of the brain both awake and asleep could easily be observed. During wakefulness the vessels of the pia mater were moderately distended

with blood, and the circulation active. During sleep the circulation was very much diminished, and the brain became pale and retracted. Durham's theory, therefore, was that sleep was caused by anæmia of brain.

Influenced by this theory, Dr. Flemming compressed both carotid arteries in himself and others, and was able, by thus arresting the flow of blood to the brain, to produce immediate and profound sleep. In the wakefulness of infants due to teething or other sources of irritation, the hot bath induces sleep, more by the determination of blood from the head than by the relaxing influences of the immersion. Also the peculiar condition called fainting, to all outward appearances, is directly due to a sudden departure of blood from the head, and in all probability is only a profound sleep thus suddenly induced. The conclusion is the more reasonable when it is observed that the best remedy for syncope is to lower the upper extremity of the body below the horizontal, and thus produce a mechanical return of blood to the brain.

Anæmia of the brain is now generally accepted as the direct cause of sleep, due undoubtedly to vaso motor nerve influence. Positive knowledge can go no further; but observation teaches that long continued physical effort, requiring repose; repose itself; soothing sounds and influences, lulling mental activity; mechanical or sympathetic influences, like position or revulsion, tending to withdraw blood from the encephalon; the removal of light or sound; in fact the withdrawal of all causes that provoke reflex nervous action, are the factors that accomplish this anæmia and lead to sleep. For the cerebrum may be looked upon as an inhibitory influence upon the sympathetic. Withdraw this influence, and the vaso motors successfully exert a tension upon the cerebral capillaries which is constant, though during wakefulness controlled.

Accepting then the theory that sleep is caused by cerebral anæmia, it follows naturally that insomnia arises from cerebral hyperæmia. And since the causes of this hyperæmia are various, as a corollary it may be stated that no one remedy can in all cases act as a hypnotic. Rather is it necessary to differentiate the disturbing element, and remove or neutralize it.

Among the many causes that determine this cerebral hyperæmia, the most prominent are — pain, excitability of afferent nerves or nerve centers, high temperature, and sympathetic derangements of circulation determining to the head. These all admit of various combinations, calling for corresponding variations of treatment.

Pain.—Under this head are included all grades of pain, from mere physical discomfort to extreme agony. All pain provokes reflex nerve activity, and thus maintains cerebral hyperæmia. In its milder forms the resulting insomnia is best combatted by the use of the bromides, whose physiological action is to lessen the susceptibility of the afferent nerves and quiet cerebral excitement. In graver forms of pain there is (outside of anaesthetics) no analgesic equal to opium, and it alone can be relied on. Under such circumstances sleep forced by chloral hydrate is restless and unrefreshing; and the doses required of it and potassic bromide are too large to be safely continued.

The salts of morphia are undoubtedly the best form of opium, and the hypodermic syringe the best means for its administration. By this method the first or stimulating influence of the drug is escaped, and the patient passes at once into sleep. Another advantage is gained in avoiding the local benumbing effects of the drug upon the stomach, and the transference of those effects to the seat of pain, by there placing the injection. This latter is well illustrated in the superior influence of suppositories of opium, or rectal injections of some form of it, for pain located in the rectum or genito urinary organs. Various authorities condemn the use of over one-sixth grain of morphia hypodermically; but my observation has been that such an amount is often inefficient. I seldom use for an adult less than from seven to ten minims of Magendie's solution of morphia (16 gr. to ℥j), equal to one-fourth to one-third grain of morphia, and in hundreds of such injections have never seen any bad results.

Owing to the fact that therapeutic doses of opium increase the force of the heart's action and stimulate the nerve centers, it is contra indicated in inflammation or acute congestion of

the brain. My own conviction, however, is that opium can often be safely used, if properly guarded, where tradition has forbidden it, provided always that the cause of brain congestion is not permanent. It is often a question whether the extreme reflex nerve irritability and irritative fever growing out of continued severe pain, will not produce more cerebral hyperæmia than a full dose of opium, and whether centric nerve inactivity, with passive congestion, is not preferable to reflex irritability and active congestion. The principal objection is to the stimulating effect of the drug; but with full doses used hypodermically this effect is very transient. Under such circumstances, to neutralize the objectionable influence of the drug, and yet not lose its analgesic power, a hot bath or a hot foot bath should be taken before its administration, or better still, drop doses of tr. aconite root should be given each fifteen minutes until three or five are taken, and the injection then be administered. Another contra-indication to the use of opium is idiosyncrasy. In certain nervous women opium produces extreme nervous prostration, with headache and excessive vomiting. In such cases, where its administration is a necessity, it should be used hypodermically, preceded for twenty minutes by thirty or forty grains of potassic bromide, or it may be given in solution with fifteen or twenty grains chloral hydrate. Either combination diminishes the amount of morphia required, and at the same time lessens the reflex irritability of the nerve centers. As the force of this depressing effect of opium seems to be expended upon the pneumogastric nerves, a minute amount of atropia might be added to each dose, as a stimulant to the vagi, but not enough to antidote the hypnotic effect.

A final contra-indication to the use of opium is the danger of forming the opium habit. In chronic insomnia it should be used with great care. It is a deleterious drug, and has too long been looked upon as the only reliable hypnotic. Physicians are largely responsible that nearly every household, among its domestic remedies, contains a bottle of paregoric for babies and laudanum for adults. The truth is, that as a

pure hypnotic, opium should never be used, unless other symptoms or severe pain temporarily demand it.

When pain rises to agony sleep is imperative, both from a humanitarian point of view and as a means of preventing rapid nerve exhaustion. In such cases moderate doses of opium are inefficient, and the only efficient means — anesthesia — cannot be long enough continued. An ingenious combination of the two will often secure long and profound sleep. The method is first to produce complete anesthesia with chloroform or ether, and then to administer hypodermically from $\frac{1}{3}$ to $\frac{1}{2}$ gr. morphia. In this way from eight to fifteen hours of profound sleep may be obtained. Though not sufficiently tested to be proven absolutely innocent, this method has so far been followed by no bad results.

A second cause of insomnia is excitability of afferent nerves or nerve centers. This is the prolific source of almost all wakefulness. Whether we have unrest produced by over mental work or excessive anxiety, whether the emotions or passions enter as factors, or excessive venery, or uterine derangements, or abuse of alcohol, or the specific poisons of disease exist as active causes, the result is the same, viz.: Excessive nervous reflex activity, opposing anæmia of brain, and forbidding sleep. In all such cases treatment of the remote causes is necessary. For the suppression of the immediate cause, the reflex irritability thus produced, two drugs are deservedly held in high esteem, namely, chloral hydrate and potassic bromide.

Chloral hydrate is a pure hypnotic, producing sleep in all points like natural repose. Physiologically it acts directly upon the cerebrum and nerve centers, producing slower pulse, lessened respiration, lowered temperature, and diminished consumption of oxygen and elimination of carbonic acid. In larger doses it produces decided fall of temperature, and progressively paralyzes the nerve centers. Its therapeutic uses are in accord with its physiological effects. In all nervous wakefulness from mental or physical overwork, or of an emotional character, chloral hydrate is indicated. In extreme debility it is forbidden on account of its paralyzing effect upon

the nerve centers; and in pain it is useless on account of its slight anæsthetic properties.

On the other hand, potassic bromide is specially useful in nervous wakefulness due to excessive venery, or from sympathy with uterine disorders, or from "unstrung nerves" resulting from abuse of tea, coffee, alcohol or tobacco, or in convalescence from acute disorders. Physiologically it lessens the susceptibility of afferent or sensory nerves, by direct action paralyzing their peripheries. It also quiets cerebral excitement by direct action on the brain centers, and has special control over the genito-urinary nervous system. In large doses it weakens the heart muscle, thus diminishing the force of its beat and the blood pressure, and lowers temperature by retarding tissue change. In doses as large as will be tolerated by the stomach it appears to be harmless, but on account of its weakening effect upon the heart muscle, extreme debility is a contra-indication to its use.

While these two drugs are specially indicated in nervous wakefulness, other symptoms may suggest various combinations. As illustrations — with anæmic and hysterical females the chloral or bromide may be associated with an anti-spasmodic and diffusible stimulant; or in cases due to over mental work or anxiety, accompanied with headache and passive brain congestion, a few drops of the tincture of aconite root, or the fluid extract of gelseminum, or the tincture of veratrum viride may be added to each dose of either medicine. Or mechanical means may be used. Thus in cases where the uterus is the remote cause of the insomnia, a hot vaginal douche, continued for fifteen or twenty minutes, in addition to the bromide, will wonderfully facilitate sleep, provided local conditions do not contra-indicate it.

Still another source of nervous wakefulness is found in extreme physical and nervous exhaustion. Almost every physician has observed the jactitation and delirium after profuse hæmorrhage, or the quiet raving in continued and severe fevers. At first sight wakefulness here would appear paradoxical, for surely with so fluttering a pulse, and so low a blood pressure, anæmia of brain must be excessive. However, the

demands from all parts of the system for increased blood supply, or greater innervation, are so imperative that in the brain centers reflex nerve activity is intense, and anæmia as a cause of sleep is completely overwhelmed. While in such cases opium should be heroically administered, still even such use of this drug will be abortive unless accompanied by the free exhibition of diffusible stimulants and nutrition. A good plate of raw oysters will often cause sleep where a proper dose of morphia alone would utterly fail; and brandy can be a god-send to a patient who has been muttering under the influence of opium for hours.

A third cause of insomnia is high temperature. The effect of heat is to stimulate all functional activity. As long as this stimulation is moderate no evil results, for while tissue disintegration is more rapid, integration is correspondingly hastened. If, however, the heat be excessive, destruction surpasses nutrition, and exhaustion begins. In addition, overtaxed construction produces cells, whose only function is to die, and fatty degeneration follows. Thus with exhaustion and deterioration of tissue, the demands upon the nerve centers for a better nutrition become urgent, and an extreme reflex activity is awakened. Still further, the stimulus of great heat creates an intense molecular vibration in the nerves themselves, and reflex activity is converted into an excessive irritability. Wakefulness, delirium, and even mania, are the necessary results. The situation is critical and perplexing. Arterial sedatives are indicated, but the cardiac weakness frowns upon them; depresso-motors seem called for, but they are powerless before the extreme irritability. Three remedies have partially met this condition, namely: quinine, alcohol, and salicylic acid. In large doses they all decidedly lower temperature and retard tissue change. Salicylic acid probably is the best antipyretic known. (? Ed.) Still their success is but partial; and I am fully convinced, after a careful review of cases, that the direct abstraction of heat is the remedy. It is a positive relief to read of the success that has attended the thorough use of the cold bath in Germany, especially as reported by Jürgensen.

The public, and even physicians, have been slow to learn

that ice, and abundance of cold drinks, are not injurious in fever, and that fever patients cannot catch cold from free ventilation and scanty covering. They should also be brought to look upon the cold bath as a valuable therapeutic agent, and not a dangerous experiment.

The last cause of insomnia to be considered, namely: determination of blood to the head, while present as a secondary effect in all the causes preceding, is here referred to in a primary sense. Central reflex activity, arising from pain, irritability, or heat, necessitates an increased and active cerebral circulation. Under this head, however, the persistence in the brain of an increased volume of blood, due to chronic derangements of circulation, is referred to. An illustration will explain my meaning, and exemplify the treatment. Practitioners are constantly consulted by patients — most commonly females — whose sleep is fitful and unrefreshing without patent cause. To all outward seeming, their nutrition and innervation is at par. Inquiry, however, develops the fact that they suffer constantly from cold extremities, and periodically from headaches of a congestive character. The underlying cause of their unrest is no doubt in the sympathetic nerve system. The direct cause, however, is an unequal distribution of circulation. In such and kindred cases it would be unwise to direct the medication against the resultant insomnia. Simple logic, unbiased by therapy, would lead to an equalization of blood supply. In many cases this passive brain congestion is in sympathy with some functional derangement. If digestion is at fault (often unrecognized by the patient), it should be corrected. The hours, and quantity and quality of meals, should be regulated. Especially should the supper be exceedingly light, and the dinner eaten near noon. If constipation is habitual, the bowels should be aroused from their torpor, not by purgatives, but by drugs that stimulate their peristaltic action and normal secretions. If the irritation be ovarian or uterine, proper specific treatment should be adopted. Should none of these causes be present, and the maldistribution be apparently due to torpor of the vaso motor nerves, such nerves should be stimulated by mechanical means, such as

exercise, the cold douche, frictions, and electrical shampooing. Perseverance in discovering and treating the remote cause will generally be crowned with brilliant success.

The thoughts thus committed to paper are simply suggestions touching upon the subject, and pointing to a wide field for research. The few drugs mentioned are not chosen as specifics, but as the best representatives of a large class of remedies. When they fail there will be time and opportunity enough for a vast selection.

A LARYNGEAL SPONGE HOLDER AND FORCEPS.

By FRANK H. DAVIS, M.D., CHICAGO.



The Laryngeal sponge and brush holder shown in the accompanying cut is formed of a hard rubber tube, the size and length of a catheter, conveying through its center a small steel staff. This staff is split at the end with a slightly hooked fork, which spreads as the staff is thrust out from the tube, and is closed or clamped together as it is withdrawn in again. A bit of sponge or the brush from a camel's hair pencil, placed in the fork and the staff withdrawn, is hooked through and tightly drawn against the end of the instrument. The nut at the handle can then be turned up against the end of the tube, and thus prevent any possibility of the brush or sponge becoming detached or dropping into the trachea. The sponge is also readily discharged without the necessity of soiling the fingers, and a fresh one substituted for each application. The instrument has a perfectly smooth even end, with no bulbous enlargement to be caught in the glottis; the rubber hook is also very much better tolerated in its contact with the mucous membrane of the

throat than the ordinary metal holders. By slight heat this curve of the instrument can be adjusted to any angle desired. It is thus rendered available in making applications to the pharynx, anterior or posterior nares, and also for plugging the posterior nares. In this latter operation a silk thread is tied to a bit of sponge caught in the holder, and is passed through the side of the nose to be plugged. The staff being pressed outward will appear with the sponge below the soft palate, and can be seized by a forceps, the sponge detached, and the holder withdrawn. The plug is then attached to the cord, as ordinarily directed in this operation. The instrument is also available as a light laryngeal or nasal forceps for removing small foreign bodies. Its use for this latter purpose must be directed by the laryngeal mirror, and it is consequently not as readily used as the hair snare or probang.

THE MORTALITY OF SURGICAL OPERATIONS IN THE UPPER LAKE STATES, COMPARED WITH THAT OF OTHER REGIONS.

By EDMUND ANDREWS, A.M., M.D.,

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ASSISTED BY THOS. B. LACEY, M.D.,

ASSISTANT SURGEON IN THE NATIONAL SOLDIERS' HOME.

(Continued.)

LARYNGOTOMY AND TRACHEOTOMY, ABROAD; FOR DIPHTHERIA OR CROUP.

AUTHORITIES.	CASES.	DIED.
Boston City Hosp. Rept.	9	5
Prof. Wilms, of Berlin.	335	232
Arch. klin. Chir. Dr. Kühn, B. 8.	277	152
K. k. allg. Krankenhaus, Wien.	10	7
St. Bartholomew's Hosp. Repts.	10	6
Totals.	641	403

Mortality, 63 per cent.

LARYNGOTOMY AND TRACHEOTOMY FOR DIPHTHERIA OR CROUP,
ABROAD.

Arranged by Ages, from Prof. Wilms, of Berlin.

	CASES.	DIED.	PER CENT. MORTALITY.
Under 2 years.....	6	6	100
From 2 to 3 years.....	56	41	73
From 3 to 4 years.....	69	47	68
From 4 to 5 years.....	74	56	76
From 5 to 6 years.....	57	37	65
From 6 to 7 years.....	33	18	55
From 7 to 8 years.....	21	16	76
From 8 to 14 years.....	19	11	58

LARYNGOTOMY AND TRACHEOTOMY ABROAD, FOR OEDEMA GLOTTIDIS.

AUTHORITIES.	CASES.	DIED.
Archiv. klin. Chir., B. 8, S. 559.....	73	19

Mortality, 26 per cent.

LARYNGOTOMY AND TRACHEOTOMY, ABROAD; FOR REMOVAL OF
FOREIGN BODIES.

AUTHORITIES.	CASES.	DIED.
Archiv. klin. Chir., B. 8, S. 559.....	149	40
Dr. Durham, Holmes' Syst. Surg., Vol. II., p. 496.....	167	37
Prof. Hamilton, of Columbus Med. Col., O.	46	12
Totals.....	362	89

Mortality 25 per cent.

LARYNGOTOMY AND TRACHEOTOMY FOR ALL CAUSES, ABROAD.

AUTHORITIES.	CASES.	DIED.
Boston City Hosp.....	15	6
A. E. Durham's collection of cases operated on for foreign bodies, Holmes' Syst. Surg.....	167	37
Med. and Surg. Hist. War of Rebel'n, Vol. I., Pt. I.....	20	13
K. k. allg. Krankenhaus, Wien.....	46	22
Statist. des Hôpit. de Paris, 1861-3.....	513	354
Hôpit. des Enfants Malades, Paris, 1851-63, quoted by Fischer & Bricheateau, Traitement du Croup, etc.....	1013	749
Hôpit. St. Eugénie, Paris, 1854-61, same authority.....	396	329
Same Hospt., 1862-3. Statist. des Hôpit., Paris.....	225	153
Other Hosp. of Paris. " ".....	17	11
Dr. J. Kuhn, Arch. klin. Chir., B. 8, S. 559.....	707	269
Totals.....	3119	1943

Mortality, 62 per cent.

OPINIONS OF AUTHORS.

Dr. H. A. Johnson, Prof. of Diseases of the Respiratory and Circulatory Organs in the Chicago Medical College, has had more experience in tracheotomy, probably, than any one in the Lake States. He gives the following opinion:

"Tracheotomy or laryngotomy should be performed in all cases of threatened asphyxia from causes which cannot be speedily removed by other methods, as for instance in cases of

"1. Foreign bodies in the larynx not easily reached and removed through the natural passages.

"2. Œdema of the glottis, threatening death from asphyxia.

"3. Tumors, malignant or non-malignant, in the larynx, threatening asphyxia, and not easily removed through the natural passages.

"4. Acute inflammation, simple or diphtheritic, producing so much obstruction to respiration as to materially diminish oxygenation of the blood.

"The danger in all these cases is not so much from the operation as from the disease for which it is performed, hence the earlier it is done the better.

"The operation is seldom successful in children under two years of age.

"In young subjects especially high tracheotomy is preferable to the low operation.

"Ether may be given when there is not much asphyxia, but in the asphyxiated condition there is already anæsthesia. The exhibition of ether in such condition probably adds to the danger."

A. E. Durham, of Great Britain, (Holmes' System of Surgery,) says laryngotomy should not be performed in early childhood, on account of the small size of the crico-thyroid membrane; nor in acute or extensive disease or injury of the larynx, but is adapted for adults, and especially for males. It is the best operation for foreign bodies impacted in the larynx, and for polypus, stricture and limited chronic disease of the organ. He recommends laryngo-tracheotomy when the patient is too young for laryngotomy, and the surgeon fears to go below, but not for adults, lest the voice be injured.

Tracheotomy he advises for adults, and generally the lower operation in dyspnoea from acute laryngitis, polypi, syphilitic diseases, etc.

A. W. Barclay, of Great Britain, (Holmes' System of Surgery, Vol. IV., p. 513,) says in respect to membranous croup, "Our chief resource for prompt relief to breathing is tracheotomy." He distinguishes membranous croup from diphtheria, and is dubious about the operation in the latter disease, but concludes that it is justifiable where the dyspnoea is so urgent as to throw other symptoms into the shade.

Erichsen says that tracheotomy and laryngotomy are required in croup and diphtheria when the laryngeal obstruction to respiration is great, and pulmonary and bronchical disease relatively slight. Many cases of dyspnoea from other diseases and from accidents also require it.

Gross advises tracheotomy in urgent dyspnoea in oedema glottidis, diphtheria, etc., and also for foreign bodies in the air passages.

Hamilton prefers crico-thyroid laryngotomy in apnoea from hanging, drowning, and other causes requiring haste, thyrotomy for laryngeal growths, and high tracheotomy for most cases of diphtheria and croup requiring operative relief. Low tracheotomy he admits only for cases complicated with bronchocele, or for impaction of foreign bodies in the bronchi.

Druitt advises tracheotomy or laryngotomy for threatened asphyxia from croup, diphtheria, or from any other disease.

CONCLUSIONS.

The opinions of Prof. H. A. Johnson, quoted above, express the results of the best investigations on this subject so correctly that it seems unnecessary to do more than refer to them as in my opinion giving the proper indications for this operation.

As between the Lake States and other regions the figures show to our disadvantage, thus:

Mort. of laryngotomy and tracheotomy,	54 per cent.
Ditto in Lake States,	. . . . . 81 " "

I think this inferiority in the results of our surgery is due to two causes:

1. Operating on too many patients below the age of two years.

2. Delaying the operation until the patient was too far exhausted to recover.

The operation ought to be performed earlier.

LITHOTOMY.

Calculous diseases of the urinary organs in the Lake States seem to be less frequent than in Missouri, Kentucky and Tennessee. This is probably due to the fact that the water of the Great Lakes, which furnish the drink of all the towns on its shores is almost destitute of any mineral constituents, and differs but little from rain-water. Hence there is probably no surgeon on these shores who can show a list of cases so numerous as some of the operators elsewhere have done.

TABLE XIV.

LITHOTOMY.

NO. IN XY REC'D	OPERATOR.	AGE	SEX	DESCRIPTION OF CALCULUS.	COMPLICATIONS.	OPERATION.	Cond. at op.	Time to Operation.	Result.	Time to death or recovery.	Practice.
54	Dr. Z. Pitcher.	M	12	Large calculus.	.....	Supra-pubic.	.....	.....	.....	.....	Private.
90	"	M	7	Calculus fusible, 1 x 1½ in.	.....	Lateral.	.....	.....	.....	4 weeks.	Hospital.
371	"	M	11	" " 2½ x ¾ "	.....	"	.....	.....	.....	30 days.	Private.
1294	"	M	5	" " 1 x 1½ "	.....	"	.....	.....	.....	6 weeks.	"
1720	"	F	55	" " 1 x 1½ "	.....	Forward to pubic & left	.....	.....	.....	.....	"
1746	"	M	65	" " ¾ "	.....	"	.....	.....	.....	.....	"
1755	"	M	25	" " ¾ "	Severe hemorrhage	.....	.....	.....	.....	.....	"
1761	"	M	6	" " ¾ "	fr. bladder bc. op.	Lateral	.....	4 years.	died	2 days.	"
1763	"	M	25	" " 1½ x 1½ "	.....	"	.....	some years.	recovered	.....	"
1785	"	M	5	" " 1½ x 1½ "	.....	"	.....	1½ years.	.....	25 days.	"
1780	"	M	7	" " 1½ x 2 "	.....	"	.....	.....	.....	.....	"
5700	"	M	12	" " 1 x 2 "	Incontinence of ur.	"	.....	.....	.....	.....	"
5176	"	M	2	" " ¾ "	.....	"	.....	4 years.	died	11 weeks.	Hospital.
6060	"	M	8	" " ¾ "	.....	"	.....	.....	.....	.....	Private.
6151	"	M	35	" " ¾ "	.....	"	.....	.....	.....	.....	"
6550	"	M	52	2 Calculi	.....	"	.....	.....	.....	.....	"
6836	"	M	22	Calculus mulberry, 3¼ dr.	.....	"	.....	.....	.....	.....	"
6839	"	M	2	Calculus fusible, 1x1¼ in.	.....	"	.....	.....	.....	3 weeks.	Hospital.
7017	"	M	40	" " small	.....	"	.....	.....	.....	4 "	"
7250	"	M	9	" " 1½ in. long	.....	"	.....	.....	.....	1 month.	Private.
7683	"	M	5	Phosphatic calculus, 1x1¼	.....	"	.....	.....	.....	3 weeks.	"
8487	"	M	89	" comb. 5½ oz	.....	"	.....	.....	.....	6 "	Hospital.
8515	"	M	11	Calculus in memb. portion of urethra, 2½ in. long.	.....	"	.....	.....	.....	.....	"

RECAPITULATION.

	CASES.	DIED.	PER CENT. MORTALITY.
Total Lithotomy.....	48	11	23
Lithot. over age of puberty.....	21	8	38
“ under “.....	26	3	12
Hospital.....	21	8	38
Private practice.....	28	3	11
Lithotrity.....	1	0	0

LITHOTOMY ABROAD.

AUTHORITIES.	CASES.	DIED.
Gross' cases—Gross on Ur. Org., p. 276.....	140	12
Mott's “ “ “ “ p. 276.....	162	7
Mettauer's “ “ “ “ p. 276.....	91	4
Kissam's “ “ “ “ p. 276.....	65	3
Goldsmith's “ “ “ “ p. 276.....	58	3
N. R. Smith's “ “ “ “ p. 276.....	45	3
Dudley's cases, Ky., given by Eve, Trans. Am. Med. As. 1871	225	7
Eve's cases, Tenn., adults.....	51	8
“ “ “ children.....	45	3
Pope's cases, St. Louis, Mo., adults.....	35	2
“ “ “ children.....	32	2
Boston City Hospital Report.....	5	0
Pennsylvania Hospital.....	111	90
United States Marine Hospital Report.....	1	0
Circular No. 3, S. G. O.....	9	1
Sir Henry Thompson's British Collection minus, the Nor- wich cases.....	1034	123
Mr. Chas. William's table of Norfolk and Norwich cases for 97 years.....	1015	132
St. Bartholomew's Hospital.....	73	13
St. George's “.....	17	1
British Army Reports.....	6	0
Luneville's Hosp.—Gross on Ur. Org., p. 276.....	365	33
Hotel Dieu, La Charité and Hôp. des Enfants—Gross on Ur. Org., p. 276.....	133	33
St. Mary's Hosp., Moscow—Gross on Ur. Org., p. 276.....	411	42
Loretto Hosp., Naples— “ “ “ p. 276.....	553	82
Saharunpore Disp., India— “ “ “ p. 276.....	824	108
K. k. allg. krank. Wien.....	65	25
Mission Hosp., Canton, China, Dr. Kerr.....	187	19
Totals.....	5758	576

Mortality, 13 per cent.

The effect of age is shown by the following figures of Sir Henry Thompson:

MORTALITY OF LITHOTOMY AT DIFFERENT AGES.

DURING THE YEARS.	CASES.	DIED.	PER CENT. MORTALITY.
1 to 5, inclusive.....	473	33	7
6 to 11, ".....	377	16	4
12 to 16, ".....	178	19	11
17 to 20, ".....	76	11	14
21 to 29, ".....	86	11	13
30 to 38, ".....	75	7	9
39 to 48, ".....	100	17	17
49 to 58, ".....	191	40	21
59 to 70, ".....	233	63	27
71 to 81, ".....	38	12	32

The following figures are taken from Mr. Keith's table, British Medical Journal, March 20, 1869, and show the mortality in groups of twenty years:

AGE.	CASES.	DIED.	PER CENT. MORTALITY.
Under 21 years.....	1530	151	10
21 to 40 years.....	356	66	19
41 to 60 ".....	477	108	23
Over 60 ".....	479	156	33

Dr. Dulles, of Philadelphia, in the Am. Jour. Med. Sci., July, 1875, gives a table showing how the dangers of lithotomy increase with the weight of the stone, as follows:

Under one ounce.....	Mortality, 9 per cent.
One to two ".....	" 16 " "
Two to three ".....	" 41 " "
Three to four ".....	" 43 " "

Mr. Crosse and Dr. Gardner calculate the mortality according to size as follows for the Norfolk and Norwich Hospital and the Saharupnore Dispensary:

	CASES.	DIED.
One ounce and under.....	969	88
One to two ounces.....	249	38
Two to three ounces.....	68	25
Three to four ounces.....	21	12
Four to five ounces.....	11	6
Five to six ounces.....	7	2
Six to seven ounces.....	2	2
Totals.....	1327	173

MEDIAN OPERATION.

Prof. Gross (Urin. Org., 1876,) gives the following collections:

	CASES.	DIED.
American Surgeons.....	205	9
Reyer, of Cairo.....	56	9
Norfolk and Norwalk Hosp.	64	13
Pemberton, of Birmingham.....	25	1
Totals.....	350	32

Mortality, 9 per cent.

BILATERAL OPERATION.

Cases, 536. Died, 41. Mortality, 8 per cent.

RECTO-VESICAL OPERATION.

Cases, 83. Died, 16. Mortality, 19 per cent.

SUPRAPUBIC OPERATION.

Dr. Dulles, of Philadelphia, gives the following comparison between the lateral and suprapubic operation, which seems to indicate that the latter is safest for stones of very large size, but not for those of less than two ounces weight:

WEIGHT OF STONE.	LATERAL OPER.		SUPRAPUBIC OPER.	
	CASES.	DIED.	CASES.	DIED.
Under one ounce.....	529	47	14	3
One to two ounces.....	119	18	21	4
Two to three ounces.....	35	16	14	4
Three to four ounces.....	11	7	19	6
Four to five ounces.....	5	3	16	7
Five to six ounces.....	2	0	11	4
Six to seven ounces.....	2	2	2	1

LITHOTRITY.

This operation has been inexcusably neglected in the Lake States. I have record of only one case, which was however successful.

LITHOTRITY ABROAD.

AUTHORITIES.	CASES.	DIED.
Brodie	115	9
Fergusson	109	12
Keith of Aberdeen	116	7
Thompson	204	13
Crichton	122	8
Boston City Hospital	1	0
Pennsylvania "	14	2
Trans. Am. Med. As., 1871, Prof. Eve	4	0
Trans. N. Y. Med. Soc.	49	9
Statist. Hôp. de Paris, 1861-2-3	56	9
Civiale, Paris	591	14
K. k. allg. Krank, Wien	42	16
Lücke, Berne	2	0
Dr. J. G. Kerr, Mission Hosp., Canton, China	30	3
Totals	1455	102

Mortality, 7 per cent.

The large figures of Civiale, in the above list, showing a mortality only one-third that of the best surgeons elsewhere, have been received with much incredulity, and even gave rise to direct charges of falsehood; especially as the official statistics of the hospitals of his own city show a mortality six times as great.

It would be, perhaps, safer to exclude the Parisian statistics from the list entirely, which would leave the results of the operation elsewhere, as follows: Cases, 808; deaths, 79; mortality, 10 per cent. Probably this is not far from the truth.

OPINIONS OF AUTHORS.

Civiale was almost the inventor of lithotritry, or, at least, he was the first to give it a practical form, and to establish it in the profession. He advocated it warmly as a matter of course.

Sir Henry Thompson says that lithotomy should not be performed in adults, for stones, unless they are above the middle size, say larger than an almond; but lithotritry be substituted for it. Above the middle size he would be guided by the condition of the patient, as to his probable ability to

bear the number of sittings requisite to pulverize such large calculi.

Most authors prefer lithotomy for children, both because the risk is slight and because the urethra is inconveniently small for lithotripsy, and the child will not readily remain quiet during the sittings of the latter operation; yet Ferguson and others have performed it on children, and Coulsen claims that it will prove safer for them than lithotomy.

Mr. Hawkins (Holmes, Syst. Surg., Vol. IV, p. 1112) opposes lithotripsy in children, but that in adults irritable bladders and diseased kidneys do not, as was formerly thought, necessarily forbid it.

Erichsen, Bryant, Morland, Gross, Ashurst and Hamilton agree for the most part as follows.

Lithotomy is generally to be preferred:

1. In children.
2. In very narrow and irritable urethras, with the calculus large.
3. In cases with badly diseased, irritable, sacculated or very atonic bladders.
4. In very hard stones over an inch in diameter, or softer ones over an inch and a half in diameter.

Lithotomy is preferred by these authors in nearly all other cases, but the rules must be subject to exceptions in cases where special combinations of circumstances require it.

CONCLUSIONS.

Lithotomy is a rather rare operation in the Lake States. Its success here is also less than abroad, a fact in striking contrast with most other operations.

Of our forty-eight cases on record eleven died, which is twenty-three per cent., while the rest of the world gives us in over five thousand cases a death rate of only thirteen per cent.

If we compare the Lake States with Missouri, Kentucky and Tennessee the contrast is still greater. In the latter States three hundred and eighty-eight cases give only twenty-two deaths, which is less than six per cent. The only reason

which I can offer for our inferior results is, that the disease being rare in the Lake States, the people, though so alert in business affairs, are unaccustomed to think of this disease, and in its earlier stages rarely suspect its existence. On this account they generally neglect it until it is so far advanced that the safest period for operation has passed by.

One of my worst cases was that of a highly educated man who had a calculus for many years, and yet obstinately refused to entertain the idea of its existence, and rejected all the advice of his physician to submit to an examination.

The remarkable results of lithotomy in Missouri, Kentucky and Tennessee are due to several causes:

1. The frequency of the disease keeps the populace alert on the subject, and prompt to seek aid if it is suspected.

2. Owing to the mildness of the climate the houses are extremely open to ventilation, even in many cases to the actual absence of doors and to the leaving out of all "chinking" from the interstices of the numerous log cabins. Houses are built, not for tightness and warmth as in our cold climate, but for coolness and ventilation. The patients, therefore, are exempt, from many causes of pyæmia and other septic complications.

3. The population is thoroughly well fed and magnificently developed, averaging considerable taller and larger than in most other States. They are, therefore, better subjects for operation than the denizens of northern States, who are largely immigrants from Europe.

4. Dr. Dudley, of Kentucky, selected his cases. Prof. Eve says that in addition to his two hundred and twenty-five operations there were about eighteen patients, or seven per cent. of all whom Dudley rejected on account of their bad condition. If any surgeon rejects seven per cent. of his most unpromising cases it will make a great difference in the per cent. of mortality, yet few conscientious men will feel justified in refusing to give a man a chance for his life simply because that chance is not as good as the average.

Dr. Dudley, I believe, generally used a gorget, and the bilateral incision. If I am correct in this, his large number

of selected cases is probably the reason why our figures show only eight per cent. of mortality for the bilateral method. The old rule is probably true which reserves the bilateral incision for the larger stones.

The results of the median operation seem to show very favorably, giving a mortality of only nine per cent., but it must be remembered that these are selected cases, only small stones being operated on by that method, and hence the figures give no true basis of comparison. Mr. A. Poland, in Holmes' System of Surgery, compares sixty-four cases of median with sixty-four cases of lateral lithotomy, and finds that the lateral proved the safest. On the whole it seems doubtful whether the median method possesses any decided advantage, and in future we shall hear less of it except in children, because it is now conceded that the majority of adult cases adapted to that plan are better treated by lithotrity.

Suprapubic lithotomy seems, if the small number of tabulated cases can be trusted, to be the safest plan in stones weighing over two ounces.

LITHOTRITY.

This operation has been greatly and improperly neglected among us. We have not cases enough to determine its risk. Abroad the average mortality has been seven per cent., or if we exclude the enormous and disputed list of Civiale, it will be ten per cent.

The later operations seem more successful than the earlier. Perhaps seven per cent. may approximately represent the present average.

There is no doubt that in almost all adult cases lithotrity is the safest operation, and that it should be preferred whenever special conditions of the patient do not render it ineligible. The present drift of science favors extending the application of the operation as much as possible.

OPERATIONS FOR MECHANICAL OBSTRUCTIONS OF THE INTESTINES.

Of these I find record of fifty cases, which are here subjoined:

TABLE XV.

OPERATIONS FOR MECHANICAL OBSTRUCTION OF INTESTINES.

No. in Rec.	OPERATOR OR REPORTER.	Age.	CAUSE OF OPERATION.	COMPLICATIONS.	OPERATION.	Con- diti'n	Duration before operation	Result.	Practice.
22	Dr. E. Andrews.	14	Strangulated congenital hernia.	None	Herniotomy	Good	-----	Recov'r'd	Private
21	"	60	" scrotal	"	"	"	-----	"	"
665	"	40	" femoral	"	"	"	-----	"	"
1562	"	38	" umbilical	Mortified intestine	"	"	36 hours	"	"
7694	"	45	" femoral	None	"	"	-----	"	"
7316	"	28	"	"	"	"	-----	"	"
7122	"	20	"	"	"	"	-----	"	"
8723	"	30	"	"	"	"	-----	"	"
7723	"	4	" inguinal	"	"	Med	3 days	"	"
7736	"	35	"	"	"	Good	30 hours	"	"
7754	"	30	"	"	"	Good	30 hours	"	"
8770	Dr. A. Fisher.	60	"	Gut mortified.	"	Bad	6 days	Died	Hospital.
"	"	27	"	None	"	Good	5 days	Recov'r'd	"
"	"	65	"	Mortified intestine	"	Bad	48 hours	"	"
"	"	65	"	None	"	Bad	3 days	"	"
"	"	20	"	"	"	Good	30 hours	"	"
"	"	36	"	"	"	Bad	40	"	"
"	Dr. F. W. Mercer.	"	"	"	"	"	10	"	"
"	"	"	"	"	"	"	"	"	"
"	Cook Co. Hospit.	"	"	"	"	"	"	"	"
"	Dr. H. A. Johnson.	"	"	Peritonitis	"	Bad	4 days	Died	Private
"	Dr. N. Scam.	65	"	"	"	"	"	"	"
"	"	50	"	"	"	"	"	"	"
"	"	52	"	None	"	Med	5	Recov'r'd	"
"	"	62	"	Gut mortified.	"	"	4	Died	"
"	"	28	"	"	"	"	2	"	"
"	Dr. J. Andrews.	51	"	"	"	"	2	Recov'r'd	"
"	"	84	"	"	"	"	15 hours	"	"
"	"	48	"	"	"	"	10	"	"
"	"	34	"	"	"	"	2 days	Died	"
"	"	55	"	"	"	"	"	Recov'r'd	"
"	"	"	"	"	"	"	"	"	"
"	Dr. E. W. Lee.	"	"	"	"	"	"	"	"
"	Dr. F. W. Mercer.	"	"	"	"	"	"	"	"
"	"	"	"	"	"	"	"	"	"
"	"	"	"	"	"	"	"	"	"
7787	"	55	"	"	"	"	"	"	"

RECAPITULATION.

	CASES.	DIED.	PER CENT. MORTALITY.
Herniotomy	34	8	24
Pneumatic aspiration of strangulated hernia	1	0	0
Forced injections for intussusception	5	3	60
Pneumatic aspiration for intussusception	1	1	100
Forced dilatation of stricture of rectum	6	1	17
Gradual dilatation of stricture of rectum	2	0	0
Incision of stricture of rectum	1	0	0

HERNIOTOMY ABROAD.

The literature of the profession furnish the following statistics:

AUTHORITIES.	CASES.	DIED.
Bellevue and Charity Hosp., New York, Hamilton.....	31	15
Boston City Hosp.....	10	7
Boston Private Practice of Dr. Cheever.....	17	7
United States Marine Hosp. Repts.....	5	1
London Hosps.: quoted Arch. klin. Chir., Bd. 8, S. 30.....	326	136
Large British Prov. Hosps. " " " " " " " " " ".....	177	72
Small " " " " " " " " " ".....	118	53
Dutrepont's personal observations.....	12	1
Paris Hosps., Old statistics of Malgaigne.....	220	133
" " Statist. des Hôp. de Paris, 1861-2-3.....	172	136
Textor's Cases, Wurtzburg.....	56	24
K. k. allg. Krankenhaus, Wien.....	259	114
Deutsch. Zeitschrift, Bd. 2, S. 381.....	27	16
Arch. klin. Chir., Bd. 11, S. 320, 341.....	45	15
Totals	1475	730

Mortality abroad, 49 per cent. Mortality in the Lake States, 24 per cent.

It thus appears that the danger of this operation in the Lake States is less than half that of the published statistics abroad. I can only account for this by the fact that the alert, wide awake western man when he has a strangulated hernia which he cannot reduce himself, comprehends the urgency of his case, and promptly sends for professional help. The operations are therefore performed early, and are consequently successful.

The slowness of the same people to apply for help in cases of calculus is because the latter disease being rare here, and coming on insidiously, is not understood nor suspected until a late period of its progress.

OPINIONS OF AUTHORS.

There is no controversy, of course, as to the frequent necessity of this operation, and still further, all surgeons are agreed that when necessary it should be performed at the earliest practicable moment, as every hour increases its danger.

Almost the only point of controversy has been whether the peritoneal sac should be opened, or the stricture divided outside the sac.

Erichsen, Hey, Ashton, Key, Luke, Druitt, Bryant and Holmes prefer division of the stricture outside the sac except where fear of mortified intestine or other special reasons forbid. Sir Astley Cooper preferred the extraperitoneal division in large old hernias, operated on early. Ashurst favors it in all cases where the taxis is justifiable. Gross and Birkett favor it in mild and recent cases, while Gant, Lawrence, J. F. Smith, Hamilton and Pirrie think that the sac should usually be opened, and the extraperitoneal division be reserved for exceptionally favorable cases.

Statistics have been gathered to decide the question, but I have not inserted them, because they are worthless. At first glance the extraperitoneal shows much less mortality than the other method; but the fact that the early cases only are selected for extraperitoneal division, shows that this operation is performed on much the safest class of patients, while the later cases, where there is risk that the gut may be mortified, compel the opening of the sac.

Late cases are always dangerous, whether there is mortification or not; hence, there is no proper basis of comparison. There are no reliable statistics of the two operations performed on patients of the same quality.

CONCLUSIONS.

Herniotomy is indicated whenever other means of relief fail, and should not be delayed a single hour unnecessarily. When there is strong reason to fear that the gut may be already mortified the taxis should be omitted for fear of returning a mortified intestine, and herniotomy should be

resorted to at once. Every hour of delay increases the danger.

If the strangulation is so recent and mild that it is morally certain that no mortification has yet occurred, the extraperitoneal division is the best, unless special circumstances forbid, for it diminishes the risk of peritonitis. The aspirator, of course, should never be used in a case deemed to be too far advanced toward mortification for prudent taxis, but it seems probable that in early stages it may be a valuable assistant to successful reduction, and experience has not yet developed any special dangers in its use.

(To be Continued.)

THE PATHOLOGICAL TRANSACTIONS OF THE CHICAGO MEDICAL SOCIETY.

EDITED BY DR. I. N. DANFORTH.

I.

'CASE OF EPITHELIOMA.

By T. P. SEELEY, A.M., M.D.

Read before the Chicago Medical Society, Nov. 6, 1876.

W. H., American, male, aged seventy, a hotel proprietor, tall and spare, called at my office January 10, 1876. He was suffering from an extensive ulcer of the palmar surface of the right thumb, extending from the middle of the hand nearly to the second joint, the first joint being much inflamed.

The history of the case, as given by the patient, was that fifty years ago, at the age of twenty, while leaning on an old fashioned mantel piece, he fainted, fell into the fire and burned the hand so extensively that all the fingers had to be amputated through the first phalanges. The other arm and the back were also severely burned. It was about a year before the ulcer entirely healed, and frequently since then it has become fissured and sore, especially in the winter time.

A year ago last winter it broke out again, and the treatment by plasters and ointment, by which before it had been healed, entirely failed.

In December last a homœopathist applied a solution of chloride of zine and tincture of blood root for twenty-four hours, producing intense pain and increasing the size of the ulcer. A second application for thirty-six hours produced such agony that the patient could endure it no longer; hence he removed the application, finding the first joint inflamed and the ulcer still more extended.

It was soon after this that he came to me. The granulations were excessive and weak, and he was suffering so much pain that he had little rest day or night, and very little appetite. Anodyne lotions, on patent lint, were first applied, and the arm supported in a sling, and quinine, iron and opium given internally.

Under this treatment the acute inflammation was allayed, the suffering much relieved and healthy granulations commenced around the edges. The central fungus granulations were repressed by nitric acid. Nitrate of silver and various astringents were applied, and support, and a moderate pressure kept up by adhesive straps.

The cicatrization, however, did not proceed satisfactorily, and I proposed the operation of removing the thumb at the carpo-metacarpal joint with the excessive granulations, and covering the ulcer with the integuments from the back of the thumb. The patient was very much opposed to the use of the knife, but was at length persuaded, on the approval of Dr. Gunn, to submit to it. With the assistance of Drs. Fitch, Brauer and Bridge, the operation was performed on the 9th of March, Esmarch's apparatus being used and very little blood lost. The flap from the back of the thumb was made to cover the whole denuded surface, and united to the palmar edge which had been pared, by sutures and adhesive straps. An antiseptic dressing of cotton soaked in a weak solution of salicylic acid was used, on the removal of which, in about five days, the flap was found united to the surface, and a portion of the border, leaving about one-half to close by granulation. This process went on rather slowly until the patient, about a month after the operation, took a severe cold from exposure to a north wind on returning from my office. He had a

decided chill followed by acute bronchitis. Fearing pyæmia, I made a liberal use of quinine and iron, under which treatment he gradually improved, but the portion of the edge of the flap which was not united began to deteriorate, and, notwithstanding all that could be done, including the use, for a week, of boracic acid, suggested by Dr. Gunn, the ulcer increased slowly until the sixth of June, when, with the assistance of Drs. Graham and VanBuren, I amputated the forearm a little above the middle to avoid one of the old cicatrices. With the exception of the skin the parts united well under the salicylized cotton dressing, which was allowed to remain for a week. There was hardly any suppuration, but granulation proceeded slowly, so that it was about two months before the stump was entirely healed.

Several sections of the border of the ulcer in the hand were made by Dr. Danforth, which, on examination with the microscope, were found to contain the typical epithelioma cells.

Soon after the cicatrization of the stump a lymphatic gland near the axilla was found enlarged; and as the patient was unwilling to have it removed, it increased to the size of the end of the thumb, became inflamed, and on being opened discharged a thick, cheesy pus, and has continued to discharge about a month, the patient using some ointment that has been recommended to him, not being now under my professional care.

MICROSCOPY AND PATHOLOGY. Upon receiving the amputated hand from Dr. Seeley, I removed ample specimens of the diseased portion, and entered upon the study of its microscopic structure with great interest, as I had seen the case some months previously, and had taken *my* turn at trying to cure it. Numerous thin sections were made in various directions. These were then stained with Beale's carmine, slowly dehydrated by alcohol, passed through oil of cloves to remove the alcohol, and mounted in Woodward's solution of balsam in benzole. Upon carefully examining the sections under different magnifying powers, I could come to but one conclusion,

namely: that the case was one of undoubted and undeniable epithelioma. The typical structure of skin-cancer was too manifest to admit of a doubt. The so-called "cancer cylinders" were present in great perfection, and as the thin slices were made in various directions I could study them from different aspects. Out of a considerable number of mounted sections I selected the one which seemed to me, in the most perfect manner, to illustrate the history and probable mode of development of epithelioma in the present instance.

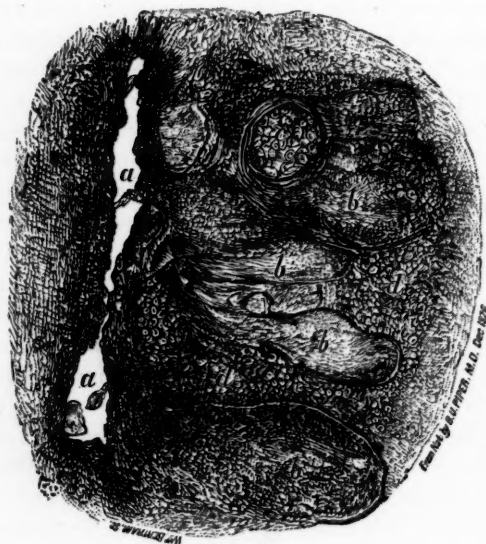


FIGURE 2.

TO ILLUSTRATE DR. SEELEY'S CASE OF EPITHELIOMA.

Structure as seen under a magnifying power of 133 diameters. Drawn by aid of camera lucida, and reduced by photography.

Fig. 2 shows, with very great accuracy, the appearance presented by a section cut in the direction of the hair follicles and sebaceous and sweat glands; that is, through the diseased tissue perpendicularly, or at a right angle to the exposed sur-

face. The open space at *a* is probably a hair follicle divided longitudinally. It is much distorted by the changes in the surrounding connective tissue, and when first examined was distended by an accumulation of large polygonal nucleated cells, due to the atypical proliferation of the compound endothelial layer of the follicle.

Subsequently, by the process of dehydration, and the various manipulations incident to "mounting" the specimen, these cells were mostly washed away; a few of them are seen, however, in the figure. It is possible that, instead of being a true hair follicle, the space referred may have been one of the subdivisions of a sebaceous gland, opening into a hair follicle; but I judged it to be the latter, because, after the section was made, a fragment of a diseased hair remained in the space, and could be distinctly seen, both by myself and others who examined the specimen.

Of course, however, it makes no practical difference which of these two glandular structures it may have been. The real point is as to the epithelial or non-epithelial origin of the new cell growth. At *b b b* are seen several of the so-called "cancer cylinders," divided longitudinally, and these are very perfectly shown, both in the specimen and in the figure. These cylindriciform bodies, when first examined in glycerine, were found to be literally stuffed with cells which closely resemble those in the open space already described. But they are rendered so exceedingly transparent by the action of oil of cloves and balsam that they can scarcely be seen by the camera lucida; hence, there are but comparatively few shown in the figure. They are very plainly demonstrable under the microscope, by using a Hartnack No. 5 obj. with a somewhat dim oblique illumination. These "cylinders" are manifestly the product of the rapid and lawless multiplication of the epithelial cells of the degenerated hair follicle. The resemblance between the cells of each is so close as to at once suggest a common origin, and there can be no doubt that this conclusion is warranted by an examination of the section. They are in fact true epithelial cells; the demoralized and degenerated children of those cells which originally formed the inner and

outer "root sheaths" of the hair follicle. But they are growing in a direction contrary to that which their law of growth commands. Their physiological growth is always *toward* the surface of the body; in the present instance they are obstinately pushing their way downwards into the connective tissue.

In reference to the development of cylinders of epithelial cancer, Mr. Arnott remarks: "In fact, the new growth seems to consist simply of masses of surface epithelium; which, instead of appearing above and between the papillæ, dip down amongst the connective tissue, and there actively multiplying and thriving as much from the unwonted supply of fluid nourishment as from the absence of the desiccating process to which they are normally subjected as they are pushed on toward the surface of the body, form large tubular and branching collections, capable of more prolific development the further they are removed from the surface, and at the same time more freely subjected to the risk of single cells being taken up and hurried away in the lymph or blood streams to form similar collections elsewhere." ("Cancer: its Varieties, etc." By Henry Arnott, F.R.C.S., p. 69.) It would, perhaps, be difficult to get the essential facts concerning the pathology of epithelioma into fewer words.

As shown in the figure, each cylinder seems to possess a distinct membranous wall; and this wall seems to be a process pushed out from the hair follicle by the distending force of the growing cells contained within them. At a later stage these walls probably undergo degeneration, and their cellular contents are consequently liberated; at this period the danger of blood or lymph infection, and consequently of secondary centers of growth, would begin.

At *c* is shown one of the cylinders which happened to be cut transversely; possibly it is a section near the club-shaped extremity or bottom of a cylinder which proceeded from a neighboring hair follicle or sebaceous gland. The thickness of the wall of the cylinder is well shown. It is also seen to be crowded with large nucleated cells resembling epithelial cells. Although not in accordance with the general teachings

upon the subject, I am inclined to believe that the "pearly globules" or "bird's nest bodies" ("*globes épidermiques*" of French authors) are sometimes produced by the concentric development of successive layers of cells, and their imprisonment within the cylinder wall. Intense compression would ensue, the well known tendency of epidermic cells to dry up and become horny would naturally follow, and thus the pearly globule would result from merely mechanical causes.

The letters *d d* refer to the "small celled brood" of Woodward, the "small celled infiltration" of Arnott. The origin of these inter-cylindrical groups of small cells is one of the open questions of our present pathology. Whether they are exclusively the product of a rapid proliferation of the connective tissue — "the invading epithelial growth being preceded by a small celled infiltration, suggesting irritative hyperplasia of the connective tissue nuclei."—(Arnott); or whether they are exclusively the product of the migrating leucocytes and their progeny; or, lastly, whether they are partly contributed by both these sources, are questions which are not yet decided authoritatively. I am inclined to believe that the latter proposition will prove eventually to be the true one. But, however this may be, it is certain that the inter-cylindrical spaces of growing epitheliomata are always filled by a luxuriant growth of cells, considerably smaller than those which form the cylinders; and this small celled brood generally precedes the growth of the cylinders. These cell-groups are doubtless due to an "irritative hyperplasia" of something. In my own view at the present time, they are the evidence and outcome of a reversion to the amœboid type of growth, both of the wandering leucocytes and the nuclei of the connective tissue corpuscles.

I have dwelt upon the histology of this case at some length because I regard it as one of great interest pathologically. It seems to be a case of *induced* epithelioma, quite local in its character in its earlier stages. I think a brief review of its history will lead us to this conclusion: Fifty years previously the tissues involved were badly damaged and their nutrition seriously and permanently interfered with by a severe burn.

In consequence of this, progressive contraction of the cicatrix had taken place, and a still greater interruption of nutrition had resulted. During all these fifty years it has frequently become "fissured and sore, especially in winter time." In the winter of 1874 "it broke out again," and the usual treatment (probably owing to advancing age, and the consequent feebler nutritive capacity of the scar-tissue) failed to produce the usual beneficial effects. Then the patient commenced a series of wanderings from doctor to doctor, and the number of remedies applied almost equalled the possibilities of the Pharmacopœia. In August, 1875, he consulted me. The ulcer had then assumed the appearance of incipient canceroid, and I advised an operation, which disgusted him and he resumed his wanderings. In December following the barbarism of applying [chloride of zinc and blood-root was committed, and prior to this electricity had been employed. In fact, the simple ulcer which formed upon the surface of a cicatrix fifty years old, upon the palmar surface of the thumb of a man seventy years old, was persistently teased and worried by the application of irritating remedies, aided somewhat perhaps by the well known disposition of the patient to examine the sore too often and renew the dressing too frequently, into degenerating from an innocent affair to an epithelial cancer. And this, I am persuaded, is a not very uncommon cause of the origin of the epitheliomata.

I. N. D.

Reported Nov. 6, 1876.

The editor of the "Transactions" desires to express his obligations to Dr. R. U. Piper for the beautiful camera drawing from which the foregoing illustration was made; and also to Mr. Bertram for the skill and fidelity with which he has reproduced Dr. Piper's drawing by the process of photographing on wood. It is proper also to remind the readers of the "Transactions" that such illustrations are somewhat costly, and that they are under obligations to the enterprising publishers, Messrs. W. B. Keen, Cooke & Co., who have kindly consented to incur the necessary expenditure.

II.

CEREBRA L EMBOLISM AND THROMBOSIS.

FOUR CASES, REPORTED BY PROF. HENRY M. LYMAN, M.D.

During the past summer I have been so fortunate as to see the *post mortem* appearances in four cases of obstructed cerebral circulation. Three of these cases were interesting because they serve to illustrate the cause of alarming symptoms and sudden death, where, under ordinary circumstances, recovery, or, at least, considerable duration of life, might have been expected. The fourth presented only what is liable to occur in any case of lingering death, with great depression of cardiac vigor and a fibrinous condition of the blood.

CASE I. N., a middle aged Irish laborer, was admitted to the County Hospital last May. He was suffering severe pain in the right thoracic region, and there was a small effusion into the right pleural cavity. The pain soon manifested itself in the right shoulder, causing great distress on motion of the joint. Subdued in this region, the pain declared itself over the heart, and a loud mitral murmur became audible. About a week after this the patient became suddenly hemiplegic — waking up in the night and finding himself unable to move his left side. He was still conscious and could articulate tolerably well when I saw him the next day, twelve hours after the accident. The diagnosis was, obstruction of the right middle cerebral artery by a vegetation detached from the mitral valve. The patient was utterly unable to move the left side, and gradually sunk into a state of speechlessness and insensibility. Death occurred on the third day.

At the autopsy about a pint of slightly turbid serum was found in the right thoracic cavity. The mitral valve was covered with recent exudation. At the bifurcation of the right middle cerebral artery was found a solid fibrinous mass, as large as a grain of wheat, completely obstructing the vessel and arresting the passage of the blood. It is worthy of remark that the left side of the brain is more frequently than the right side reached by such embolic visitors from the heart.

CASE II. M., aged eighteen, a domestic, of American
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birth, entered the hospital July 12, 1876. She was well known in the house, having been previously treated there for epilepsy, a disease with which she had been afflicted from childhood. She had several paroxysms of convulsions during the fortnight which followed her admission, but in other respects she seemed to be quite well.

One morning, however, two weeks after coming into the hospital, she was attacked with violent vomiting and diarrhœa. She complained also of a sore throat and of a high fever. Next morning she was covered with the rash of scarlatina. The vomiting and diarrhœa did not cease. She complained of severe pain in the precordial region, and was evidently much prostrated. That evening she had a convulsion, and from that time she passed from one convulsion into another until she died, about two o'clock the next morning.

At the autopsy, twelve hours after death, the skin was still brilliantly injected by the eruption. There was also a vivid arborescent injection of the entire peritoneal and pleural surfaces. The interior of the pericardial sac presented a striking contrast by its normal appearance. The mucous surface of the stomach and intestines did not present any morbid appearances to the naked eye. The liver was healthy. The kidneys were intensely congested, but were not degenerated. The lungs and air passages, as high as the vocal chords, were models of healthy tissue. The mucous surface of the œsophagus from the stomach to the level of the glottis was pale and normal. From that level the entire lining of the pharynx and posterior portion of the mouth was colored with a dark purple hue. There was little if any moisture in the serous cavities of the body.

On opening the cranium an intense hyperæmia was manifested. The superficial cerebral veins were enormously distended. This condition was the result of an occlusion of the superior longitudinal sinus by a firm, straw-colored clot, exactly like the white heart clots which are so frequently displayed upon the autopsy table. The left lateral sinus was filled with coagulated blood, which had not lost its color. A very small

black coagulum was found in the left ventricle. The blood in other parts of the body was fluid.

In this case the local arrest of circulation doubtless served to divert the principal volume of the blood current, through extraordinary channels, upon the ganglia at the base of the brain. Already modified in their structure by previous disease, this unnatural hyperæmia served to exalt their function to such a pathological degree that excessive vomiting, diarrhoea, resulting from vaso-motor disturbance, and, finally, convulsions were excited, and the patient speedily succumbed to the violence of the commotion thus aroused.

CASE III. S., a vigorous, middle aged gentleman, was one day so unfortunate as swallow a fragment of chicken bone, which was arrested in its progress just within the *sphincter ani*. At that point it had excited considerable ulceration before it was discovered and removed. The ulcer did not heal well. The superficial fibres of the sphincter were incised by one physician, another did something else. The patient traveled from one doctor to another until it could no longer be denied that he was the victim of a cancer of the rectum. He finally came under the care of Prof. Edwin Powell, M.D., by whom he was attended till death put an end to his suffering. Through the kindness of Prof. Powell I was permitted to witness the autopsy, which was performed mainly for the purpose of ascertaining the cause of certain cerebral symptoms which were manifested during the few days which preceded dissolution.

The patient, who had previously exhibited no cerebral disorder, was attacked with excruciating pain in the head. After a variable period of anguish he would become insensible, would continue for a time in a state of stupor; from which he would gradually emerge, only to renew his experience of pain, succeeded again by unconsciousness. In this way the last week of his life was passed.

At the autopsy we discovered extensive scirrhus cancer of the walls of the rectum. Small nodules of cancerous deposit were appearing upon the omentum. The other viscera pre-

sented nothing worthy of extended remark. On opening the head the greater portion of the cerebral convolutions appeared unusually pale. The sulci were filled with serous fluid, especially upon the left side of the brain, where a vein which occupied the posterior branch of the sylvian fissure was filled with black coagulum as far as its junction with the lateral sinus. This seemed to account for the symptoms which appeared before death. Diverted in considerable part from its normal course, by the occlusion of so important a channel, the blood was poured with too voluminous a current upon certain portions of the brain, in which it produced a hyperæmia with sensations of pain until the unwonted pressure was sufficient to occasion insensibility. A period of diminished circulation would then succeed, and the diminution of pressure thus produced would permit the resumption of cerebral function and the return of consciousness. Renewed activity would excite a renewed afflux of blood with consequent renewal of pain, and so forth, until complete exhaustion closed the scene.

CASE IV. Opening the cranium of an emaciated patient who died of pulmonary consumption, I found the superior longitudinal sinus occupied by a slender, straw-colored clot. There was no engorgement of the cerebral veins, nor had there been any cerebral symptoms during the last hours of life

Reported Nov. 30, 1876.

III.

HYDATIDIFORM DEGENERATION OF THE CHORION.

By CHAS. WARRINGTON EARLE, M.D.

During January, of the present year, I was consulted by one of my patients, who gave me the following facts in regard to her case:

She became pregnant about December 1, 1875, and five weeks after, a lady acquaintance attempted to produce an abortion by inserting a pointed ivory instrument into the cavity of the uterus. Only a slight discharge of blood followed this operation. Her breasts had continued to enlarge, and the morning sickness had been very severe ever since. No digital examin-

ation was permitted, and the lady departed with a few bismuth powders to allay the gastric irritability.

Early in February I visited my patient and found that a day or two since a watery sanguineous discharge had commenced, which at times was very copious and then disappeared for a few hours. A digital examination revealed the os soft and the uterus enlarged.

As the case progressed the watery discharges continued; the abdomen and mammae enlarged, the uterus seeming to extend more laterally than upward. The patient's nutrition was exceedingly poor, and an anæmic condition speedily ensued. About March 1st, possibly the 4th, a mass described as large as half a hand, slightly rounded and covered with blood-vessels, having a little membranous string attached, was discharged from the vagina. I did not see this product, but give the description as it was given to me by the ladies who were present. The watery discharges, with occasionally a little blood, continued, and there was no diminution in the size of the abdomen. March 12th, the patient suffered more than usual, and at the suggestion of a friend took her bed and applied a hot hop poultice to the abdomen. A short time after pains commenced, and suddenly with a gush, nearly, if not quite, a quart of hydatid like bodies came from the vagina. The lady and friends were now greatly excited, and several physicians were summoned during the following hour, at which time I arrived. The pulse was 150, and considerable blood was being lost. She was ordered Squibb's fl. ex. ergot, and wine when necessary. During the night quite a number of bladder like bodies came away, but these with the hemorrhage gradually ceased, and with a tonic of iron and quinine she made a good recovery by the 20th of the month.

The above case, with the following notes from the literature on the subject, was presented to the Chicago Medical Society, at its annual meeting, April 3d:

I. Substances, generally substantial in texture, the exact nature of which is not always easy to determine, are frequently discharged from the uterus. When they take place independent of impregnation they are called *false moles*. The *true*

mole is always the result of conception. In the early days of medicine most fabulous reports were believed in regard to these productions, and judging from the reputed expressions of some so-called medical men and numerous of the laity, there is still a taint of these old ideas remaining in the minds of some.

II. Substances, cyst-like in their appearance, are occasionally discharged from the uterus. It has been supposed until recently that these bladder-like bodies were *true hydatids*, and due to the acephalocyst. Recent microscopical investigations, however, prove that they are entirely different, both in their general formation and in their histological arrangement. A true hydatid of the uterus is made up of closed sacs within other closed sacs, and must contain echinococci heads, etc., etc. True uterine hydatids are very rare. Rokitansky has seen one case, and Graily Hewitt, in Vol. xii, Obst. Trans., reports a second case.

III. The hydatidiform mole, the name now given to the vesicular bodies which most frequently escape from the uterus, are simply little bladders or cysts, not inclosing other cysts, but filled with a watery albuminoid material, and furnishing no evidence whatever of hydatid origin. These vesicles, under the influence of perverted nutrition or development, spring from the villi of the chorion, and may vary in size from a walnut to a millet seed. The cause of this chorionic degeneration is not well understood. Some authorities believe the change takes place previous to the death of the embryo from some form of malformation, while others urge that an accident to or death of the embryo, diverts the developing force from its proper channel, and the degeneration commences.

The pathological specimen was submitted to Dr. Norman Bridge, for microscopical examination, who informs me that no evidence of the echinococcus could be found.

I have not been able to find, in the literature at my command, any case reported where this vesicular degeneration has occurred a second time in the same patient; indeed, I am of the opinion that somewhere in my reading, although I can not now find the article, it is stated that it does not take place

the second time. However, it did take place a second time in my patient, although to a less extent than at first.

Aug. 17. Was called in haste to the same lady, whom I found suffering from great hemorrhage; she having lost a short time before I arrived more than half a vessel of blood. In this fluid I found a number of cystic bodies, some of them the size of a grape. Only a few were passed, compared with the former amount. A good recovery was made in ten days, and excellent health has been enjoyed since.

I should add that after the first accident a few applications were made to the uterine mucous membrane, such applicants as the tr. ferri chl. being used, and continued as long as any diseased condition could be perceived.

In regard to the second accident, I suppose pregnancy had again taken place, abortion following quickly from the cystic degeneration of a chorion not yet quite healthy enough to perform normal function.

Reported April 3, 1876.

IV.

TUBERCULOSIS IN THE LUNGS OF A CANARY BIRD.

By DR. I. N. DANFORTH.

A few days ago a lady consulted me in regard to her pet canary's health. The "patient" hung his harp on the willows quite a long time previously, appeared languid and drooping, sitting sometimes for an hour or more upon his perch without change of position; took but little food, and, in fact, according to the description given to me, "appeared to be sick all over."

Shortly after this the bird died, and I obtained permission to make a *post mortem* examination. The emaciation of the body was extreme, the plumage was scant and shabby, and all appearances indicated very marked mal-nutrition. Upon opening the body I found an extensive deposit in both lungs which strongly reminded me of ordinary tubercle. Upon microscopic examination of a specimen of this deposit I found that it was indeed tubercular; the usual shrivelled, pinched and degenerate cells appearing in great numbers. No other

evidences of disease were noticed. The bird therefore must have died of true tubercular consumption; and it is interesting to notice that the history and progress of the bird's illness was quite typical of this disease.

Although it is well known that tuberculosis is a not very uncommon disease among the lower animals, it is probable that it is much more common than we have supposed. This is especially true of tropical animals brought into our climate and kept in confinement. I well remember the case of a lion who died while some menagerie, to which he belonged, was being exhibited here. His remains were bequeathed to Rush Medical College, and a *post mortem* was made. The lungs were found to be loaded with tubercle in all stages of development and decline.

Caged monkeys are likewise notoriously liable to tuberculosis, and the same fact has been observed with respect to rabbits closely confined in filthy quarters.

The case detailed interests us only as it relates to the general subject of the efficient causes of tuberculosis. The canary bird was kept for the most part in a damp, dark basement, and was consequently on a short allowance of fresh air and sunlight, both of which are indispensable to healthful bird-life. I have very good reasons for believing also that insufficient care and a want of proper food supply, as to quality and variety, were in part responsible for the degenerated type of cell-life which invaded the lungs of the little songster.

In a word, a canary bird is placed under conditions favorable to the development of tuberculosis, and a tuberculous deposit promptly takes place in the lungs. This seems to show that even birds enjoy no immunity from tuberculous disease when they are forced into situations which invite the genesis of tubercle. In view of the experimental results as to the inoculability of tuberculosis, it is possible that the liability of birds to this disease—if they are generally so liable—may yet come to have a very practical bearing in its relations to their consumption as food by the human family.

Reported Nov. 13, 1876.

Editorial.

The first completed volume of the JOURNAL AND EXAMINER is now in the hands of its readers, and they can judge for themselves how far the editorial corps has proved itself worthy of the trust conferred upon it by the Chicago Medical Press Association.

Judging from the tenor of many kind letters, and from a gratifying increase in the subscription list, the editors are disposed to believe that the changes made during the year have been approved by the profession. While they are modest enough to accept this compliment, they are not so blinded by a first success as not to appreciate the deficiencies in the character of the year's work.

Upon two of these deficiencies we desire to make a brief comment. It has, from the beginning, been our purpose to make the JOURNAL AND EXAMINER especially useful to the profession of the Northwest. With this view we have introduced the monthly *Summary of Progress of the Medical Sciences* in order to disseminate some knowledge of the observations, researches and doctrines of our colleagues abroad.

But on the other hand the JOURNAL AND EXAMINER should fairly represent the professional workers of the Northwest. Its pages should give, as in a mirror, a truthful representation of the labors of the profession in the district named, by incorporating full reports of the proceedings of its medical societies and hospital clinics. A synopsis of the papers read before the societies, and a brief record of the discussion which may follow the reading of the papers or the presentation of pathological specimens would, by the character of such papers and discussions, show the exact standing of the profession.

And so also the pages of our periodical ought to contain a record of hospital clinics, because the practice and teaching of the physicians and surgeons of the large hospitals may generally be accepted as representing the character of profes-

sional practice in a whole district or country. Besides, an accurate and well drawn report of typical cases would be useful and instructive to the readers of the *JOURNAL AND EXAMINER*.

In both these directions the editors are compelled to say that they have not been able to do justice to the profession. The reports of our medical societies, as furnished by their reporters, have been so deficient that when they finally ceased to appear, neither these pages nor their many readers were great losers.

It was a step in the right direction when the Chicago Medical Society appointed an editor for the publication of the history of cases and pathological specimens presented at its meetings. The second series of these "Pathological Transactions" will be found in this number. It reflects credit upon the editor, the several contributors and the medical society; and indicates that a little enthusiastic effort can render the material which accumulates in the dead records of the societies useful and interesting to the profession at large. If other societies would do likewise the pages of this journal would soon show a splendid record of the scientific zeal of the medical profession in this country.

Still more deplorable have been the reports from our hospitals. A medical journal published in a metropolitan city, like Chicago, provided with large hospitals, is expected to give its readers a fair account of hospital practice. But the editors have, in this respect, to depend on the efficient co-operation of the hospital physicians and surgeons. The latter are to select the cases worth reporting, and must either themselves report them or have the reports written by younger men in the profession. But certainly it should be a matter of interest to the former, one would think, to see that the cases and the comments upon them are correctly reported before they are sent to the editors. The latter cannot be held responsible for the correctness of what is published as the clinical lecture of Dr. X. if Dr. X. does not take pains in selecting an efficient clinical reporter, and in supervising the latter's work. Dr. X. must not be surprised to find his clinical lecture reported

in a fashion which he considers a disgrace to himself, if he returned for publication, and without making a single correction, a written report of his lectures which the editors sent him with an urgent request to correct the apparently erroneous statement of his remarks.

The editors are fully conscious of the fact that what clinical reports have been published during the past year very often were imperfect, and the only apology they can offer their readers is, that in the kindness of their hearts they have often appreciated the good will of the writers rather than their capacity as clinical reporters. But the editors are also compelled to say that from the largest hospital in the Northwest they have received neither encouragement nor co-operation; the attending staff of that institution having shown no disposition to furnish reports of their hospital practice. Unless they be, by some miracle, roused from this apparent lethargy, the mass of clinical material furnished by that charity will be buried within its walls; the records of cases will remain a dead letter; and the readers of the JOURNAL AND EXAMINER will not be the wiser for what is said and done within the precincts which are, to the most of them, otherwise inaccessible.

Book Reviews.

[NOTE.—All works reviewed in the pages of the CHICAGO MEDICAL JOURNAL AND EXAMINER may be found in the extensive stock of W. B. KEEN, COOKE & Co., whose Catalogue of Medical Books will be sent to any address upon request.]

GUY'S HOSPITAL REPORTS, edited by *H. G. House, M.S.*, and *Frederick Taylor, M.D.* Third series. Vol. XXXI. 8vo. pp. 469. London: J. & A. Churchill. 1876.

We have read this volume with great pleasure. It is one of the most valuable of the recent contributions to medical literature. The contents are particularly rich in original investigations.

The first article is entitled "Cases Illustrating the Diuretic

Action of the Resin of Copaiba," by Frederick Taylor, M.D. The resin of copaiba is the residue of the distillation of oleum copaibae, is described as of a dark green color, brittle, resinous in consistence, and almost tasteless. In preparing it for use the resin is softened with one-fourth of its bulk of rectified spirits; three ounces of this mixture are rubbed with four ounces of compound tragacanth powder, and mixed with four pints of water. One ounce of this mixture contains 12 or 13 grains of the resin, and was given three times daily. This preparation was administered in more than sixty cases, of hepatic ascites, simple peritoneal effusion, cardiac dropsy, anasarca, ascites secondary to emphysema and bronchitis, pleuritic effusion and renal dropsy. In favorable cases the quantity of urine was quickly increased. For example, in case 5, the urine passed the day before the drug was first administered, measured 18 ounces, and on the following day, 76 ounces. In case 6, the urine was increased from 60 ounces to 122 ounces on the following day. The diuresis thus rapidly produced, subsided as rapidly when the drug was withdrawn.

There are thirteen cases recorded in which the drug was used in ascites from disease of the liver. Commenting on these cases, our author says: "the results of the first ten cases appear to contradict very decidedly the assertion of Niemeyer, that diuretics are as useless as they are irrational in the treatment of ascites." The group representing its use in cardiac dropsy, is interesting because of the comparisons instituted between it and digitalis, with apparent advantage in favor of copaiba. As an example, in case 17, during the first nine days with the use of digitalis, there was a daily average of 23 ounces urine, but on the addition of copaiba resin, it increased rapidly to 90, 100 and 125 ounces. In case 16 the urine increased to 110 and 120 ounces under the combined use of digitalis and resin copaiba, but on the withdrawal of the latter fell to 40, 20 and 16 ounces, and rose to 80 ounces when it was again employed.

In renal dropsy the drug had no appreciable diuretic effect in three cases of tubular nephritis, but seemed to have considerable influence in one case of lardaceous disease and in one

of granular disease. In none of the cases did positive harm follow its use.

The second article is entitled "Considerations on the Cures in Insanity," by George H. Savage, M.D., and is quite an exhaustive dissertation on prognosis, the result of ten years' experience in the Bethlem Royal Hospital, by a very careful and accurate observer. The limits of this review are not sufficient to enable us to give an outline that will do it justice. There is one important fact brought out in connection with treatment of the insane, that we think of considerable value, it is the good result that sometimes follows the transfer of the patient from one asylum to another. A personal experience with these unfortunates has given us several cases in which recovery quickly followed such transfer. Our author remarks, "that the prognosis is not absolutely bad when patients have already been discharged uncured and incurable from an asylum. I have many times been annoyed to hear of patients who, after all our care and trouble, have not been benefitted, and yet have recovered on removal to rougher quarters and harder fare." At the Metropolitan Asylum, at Leavesden, only presumably incurable patients are sent, yet some are every year discharged cured.

"One is not only justified but encouraged to send to other asylums those cases that we have failed in curing at the end of a year." The records of our American Asylum for Incurables, at Ovid, N. Y., give the same results as those observed at the English institutions.

The next article is "On Fractures of the Thigh," by J. Cooper Forster, Esq. In it is considered, with great ability, and with an experience of thirty years' observation, in an excellent clinical field, the treatment most certain to prevent shortening. He first discusses the mechanism and results of treatment with the double inclined plane and the long straight splint, and then considers the splint devised by Dr. Smith, of Baltimore, as modified by Dr. Hodgen, of St. Louis, and regards this latter as the best appliance before the profession, fulfilling as it does, in a scientific manner, the indications of muscular relaxation, rest and extension. Our author has

treated, with this splint, 17 cases, with an average shortening of only one-third of an inch. In contrast with this he gives the record of 47 cases treated by various other plans, in which the shortening averaged three-quarters of an inch. He considers the Hodgen splint as the one most comfortable to the patient, admitting of the greatest freedom of body movement with least disturbance of fracture, and greatest degree of cleanliness. He enumerates, as its disadvantages, the thought and dexterity its application requires, the difficulty of obtaining the material for fitting it up, the liability to excoriation of the leg from the extension straps, and the care necessary to prevent eversion of the lower fragment with the whole of the foot.

A personal experience of the reviewer with the splint, in three cases of gunshot fracture of the femur, leads him to fully endorse all that is said in its favor.

The next article "On Meningeal Hæmorrhage," by James F. Goodhart, M.D., is an admirable resumé of 49 cases. He lays special stress on the fact that these hæmorrhages are probably often present without being suspected; that they occur from apparently trivial accidents, and that if care is not exercised, cases which might have perfectly recovered pass on into a state of permanent degeneration of the grey matter of the brain, and even into a state of chronic inflammation of the brain and its membranes, these leading ultimately to confirmed epilepsy, to insanity, and even to death.

The next paper is "On the Causes of Preventable Blindness," by C. Higgins, Esq. The object is to call attention to certain affections of the eyeball and its appendages which, if proper precaution be taken, may leave no bad results; but which, if neglected or improperly treated, will lead to more or less impairment of function, and admirably has he stated his observations.

He details his experience in granular ophthalmia, purulent ophthalmia and glaucoma, and makes valuable suggestions as to prevention and treatment. He justly condemns strong caustic applications to the conjunctiva, and gives, as the usual treatment for out patients, the following: "In the more

recent cases the palpebral conjunctiva is twice a week touched lightly all over with mitigated nitrate of silver stick (one part of nitrate of silver to three of nitrate of potash); after the application the conjunctiva is washed with salt and water. In the more chronic cases the green stone (*lapis divinus*) is used instead of the nitrate of silver. In most cases sulphate of copper drops (*cupri sulph.*, gr. ij., aqua, \mathfrak{z} j), are ordered to be dropped into the eyes three times a day or oftener. If there is much intolerance of light, or symptoms of iritis exist, gr. $\frac{1}{4}$ to j of sulphate of atropine is added to each ounce of the drops. If there be copious purulent discharge, alum lotion (gr. 10 to \mathfrak{z} j) is ordered in lieu of the drops. If extensive ulceration of the cornea exists, the eye is to be kept bandaged with lint soaked in belladonna or poppies. The granulations are neglected until the more severe symptoms have subsided."

The treatment he prescribes in ophthalmia neonatorum is the use of alum lotion (gr. ij to \mathfrak{z} j) every hour or half hour, according to amount of discharge from 8 A. M. to 8 P. M., and during the night when the child is awake. In cases where deep ulceration or perforation has taken place, he orders the eye to be bandaged with lint soaked in belladonna lotion, the bandage to be frequently removed in order to apply the alum lotion.

In mild cases of purulent ophthalmia he recommends the use of alum or other astringent lotions frequently applied; in severe cases a thorough application of solid nitrate of silver to the palpebral and ocular surface of the conjunctiva, followed by a washing with salt and water. The eye is then to be lightly covered with a piece of lint and kept constantly bathed with alum lotion (gr. x to \mathfrak{z} j), some simple ointment to be applied to lids and cheek; quinine, iron, a liberal diet with stimulant and opium at night are also prescribed.

The next cause of preventable blindness he treats of, is *undetected glaucoma*. He enumerates several cases in which the disease was mistaken for senile cataract, and appropriate treatment thereby delayed until too late for successful result. This should warn us against a hasty diagnosis of cataract

from unaided eye appearances, and cause every suspected case to be subjected to a careful ophthalmoscopic examination. The only successful treatment is operative, and this of no value unless early applied.

The contributions to dental pathology by S. James A. Salter, M.B., F.R.S., and "A Description of the Appearances of the Human Eye in Health and Disease, as seen by the Ophthalmoscope, ninth series, Retinitis Pigmentosa," by C. Bader, Esq., are both very entertaining papers.

The next article is on the "Use and Administration of Sedatives," by Paul Henry Stokoe, B.A., M.D., and is a truly valuable paper. In treating children in their first septenate, he rejects opium almost entirely for internal use. In regard to opium in second childhood, he considers it judicious to combine chloral and chloroform with it; opium being in excess when pain, chloral when restlessness, and chloroform when cramp predominates; and furthermore recommends the addition of m. x to xx of the tincture of cannabis Indica, when dealing with a heart enfeebled by advanced age or exhausting illness. In this connection we feel it our duty to give a word of warning in the use of chloral. We are aware that many practitioners regard it as harmless and freely prescribe it in doses that we consider dangerous. We have had a somewhat extensive experience in its use, especially in the insomnia of the insane, we have seen dangerous symptoms result from a 20 grain dose, and have been told of a death that resulted from one dose of 20 grains administered to a healthy woman to allay the pain of a tooth extraction. We have also known 40 grains result in poisoning, from which the patient was saved only by prompt interference. These are exceptional cases it is true, but such is our experience, and we would hesitate ever to administer to an adult, a dose exceeding 10 grains at one time.

The next article is entitled the "Fifth Report of the Guy's Hospital Lying-in Charity," collated by A. N. Galabin, M.D. It extends over a period of 12 years, and embraces 23,591 deliveries. The total number of children born is 23,811; of these 95.92 per cent. were born alive, the sexes were in the

proportion of 100 males to 88 females; 97.75 per cent. of the living children and 64.4 per cent. of still born children were delivered under a vertex presentation. There were 220 twin cases, or 1 in 107 of the whole number of women delivered. Only one cases of triplets occurred. The proportion of forceps cases was 1 in 197; out of the 121 forceps cases, five of the mothers died, one from hæmorrhage, one undelivered and three from septicæmia. The long curved forceps of Dr. Barnes were almost invariably used, even when the head was arrested at or near the outlet. These records seem to show that the application of the forceps is not necessary in as large number of cases as some of our own obstetricians would have us believe. Craniotomy was performed in 18 cases, or 1 in 1310. In fifteen the operation was resorted to for want of due relation between the head and passages, in one for compound presentation of head and foot, in one for carcinoma of the cervix uteri, and in one for the delivery of a hydrocephalic head — there were six deaths. There were seven cases of rupture of uterus and vagina — all died. As might have been expected from the enfeebled and badly nourished character of the patients, post partum hæmorrhage was of frequent occurrence, and caused death in eleven cases. Transfusion was tried in five cases, but in all was unsuccessful. A solution of perchloride of iron was injected into the uterus as a last resort in twelve cases, and in all instances stopped the bleeding — one-half of the cases died, but the injection does not appear to have itself contributed to the fatal issue. Forty-one cases of placenta prævia occurred. Two of the cases are remarkable in that the os was partially covered by the placenta and no hæmorrhage had taken place. Version was performed in 24 out of the 41 cases. Six of the mothers died, 10 of the children were delivered living and 31 were still born. The placenta was adhered and required the introduction of the hand for its removal in 75 cases, with five deaths, three from post partum hæmorrhage and two from puerperal peritonitis. Twenty-eight cases of eclampsia are recorded; this does not include, however, all the slight cases that recovered. There were seven deaths among mothers. In all cases in which urine

was examined albumen was found, except in one instance. In this internal hæmorrhage occurred after delivery, and epileptiform convulsions followed; the pulse being dicrotic and compressible, very unlike that generally found in eclampsia. It is moreover interesting to note that in all the cases that have occurred during the last 40 years, in which urine was examined, albumen was found in every case but two, one, the case above mentioned, and the other a case of arachnitis, as verified by autopsy.

Our author tells us that since 1868 no patient has been bled, but reliance has been placed on the administration of chloroform, often for many hours consecutively, even when the element of coma predominated over that of convulsion. Throwing out two fatal cases in which there was no opportunity for the proper administration of the remedy and one case that was an old epileptic, and the mortality under chloroform treatment is only 9 per cent. against 30 per cent. in which bleeding was used. There were 34 fatal cases out 36 cases of puerperal peritonitis. The usual treatment was quinine, opium and intra-uterine injections, with the occasional use of sulpho-carbolate of soda.

The mortality from all causes was 1 in 223; a result quite creditable when we consider that the patients are drawn from one of the worst neighborhoods in London, so far as extreme destitution and hygienic conditions are concerned. Rather less than half the deaths were due to septicæmia, and nearly a quarter to hæmorrhage.

The next article is entitled "The Treatment of Ulcers by the Local Application of a Weak Continuous Electric Current," by C. H. Golding Bird, B.A., M.D., and is a record of six cases treated successfully by this method.

The next article is entitled "A Case of Fracture of the Skull, Followed by a Collection of Cerebro-Spinal Fluid Beneath the Scalp." Recovery. By R. Clement Lucas, B.S. The tumor occupied the left temporal fossa, was aspirated and two ounces of cerebro-spinal fluid removed. The child has not spoken since accident. The case would probably have done better if the fluid had been left where nature put it.

The paper entitled "Remarks on some of the Paroxysmal Neuroses," by C. Hilton Fagge, M.D., is next in order. In it is discussed those functional diseases of the nervous centers that occur paroxysmally at periods more or less regular, "nerve storms," and includes migraine, vertigo, epilepsy, paroxysmal insanity, and tetany. He finds that they are essentially innate and hereditary, as are many of the neuroses; that in the same patient they are often transformed one into another in the course of time; that in the most of them there is, in each attack, a regular succession of phenomena, dependant, doubtless, upon a gradual extension of the morbid change from one part to another of the nervous centers, rather than modifications in the blood supply; that the attacks gradually culminate to a certain pitch of intensity and then subside; that a *slight* attack is followed at an unusually short period by another, and *vice versa*; and that the seizures are often traceable to causes which are very similar.

Space will not permit us to consider all the causes, but there are three that are well brought out in the paper that are frequently overlooked in practice: these are, derangement of the visual apparatus, defection of teeth, and the presence of tænia. The author offers nothing new on treatment.

The next paper is "On the Recognition of Sugar in Healthy Urine," by F. W. Pavy, M.D., F.R.S. It is a very valuable article, successfully answering in the affirmative the question: Does sugar exist in healthy urine? The writer describes a method of manipulation, in the test by fermentation, much superior to any that we are familiar with. Speaking of the pathological importance of the recognition of sugar as a constituent of healthy urine, he remarks that "it enables us to reconcile ourselves to the instances in which sugar is incidentally met with to a moderate extent in the urine without being associated with any clinical significance." He narrates three cases in which respectively 3.42, 2.55 and 4.44 grains of sugar to the ounce of urine were found, without any constitutional symptoms of diabetes, and which disappeared in a few days without any diatetic or other treatment for diabetes being employed.

This review, notwithstanding its length, but imperfectly represents the value of the report, and we, in conclusion, commend it to the profession as a book worth careful study.

D. R. B.

ANNUAL REPORT OF THE SURGEON GENERAL U. S. A. 1876.

In this brief report Dr. J. K. Barnes, Surgeon General U. S. A., informs us that the U. S. army showed an average mean strength of 21,681 white and 2,002 colored troops. Among the white soldiers 32,495 cases, or 1,499 per thousand, were taken on the sick report for diseases, and 5,066, or 233 per thousand, were reported for wounds and injuries of all kinds. The total number of deaths reported from all causes was 518, or 24 per thousand. These figures include 267 officers and men killed in the Indian war.

Among the colored troops the total number of cases of disease was 2,941, or 1,469 per thousand, and the number of wounds and other injuries was 521, or 260 per thousand. The number of deaths was 26, or 13 per thousand.

In all, 61 cases and 29 deaths of yellow fever occurred among the troops during the summer and fall of 1875.

During the past year 2,001 cases of wounds and injuries, and 71 cases of operations, have been added to the surgical registers, which now contain 267,700 abstracts of cases.

A TREATISE ON THE DISEASES OF THE NERVOUS SYSTEM. By William A. Hammond, M.D., etc. Sixth edition. 8vo., pp. 883. D. Appleton & Co., New York. 1876.

A book that has met with such a demand as to exhaust five large editions in four years, would seem to be beyond the reach of unfavorable criticism. Such is the book before us. We confess ourselves at a loss to account for such unprecedented success. Certainly we have found nothing in the volume itself that will explain it. The book contains, in our humble judgment, so much error intimately mixed with truth that it requires an adept to eliminate it, and would be in the hands of an inexperienced practitioner an unreliable guide.

The following sentence shows the laconic manner in which

our author, in the beginning, disposes of his critics: "The real value of ophthalmoscopy in diseases of the nervous system is in danger of being disregarded through the sciolism of pert pretenders, who read papers and memoirs without ever having seen the optic disk to recognize it" (page 18).

Persuing the subject of ophthalmoscopy in this relation, we find, under *active cerebral congestion*, of which our author had in his private practice in five years 622 cases, that the ophthalmoscopic examination is the most important aid to diagnosis; that it "shows the arteries of the retinae to be increased in number, diameter and tortuosity." Under partial cerebral *anæmia* from embolism, he says the ophthalmoscope should always be used; that "in the older cases we will frequently find retinal congestion." Exactly how these two revelations of the ophthalmoscope are to be reconciled with its value, as estimated by our author, we are unable to say, and are disposed to question the importance of the instrument as an aid to diagnosis, even at the risk of being called a sciolist.

If space permitted, we might say much about the unwarranted positiveness in diagnosis, pathology and treatment that pervades every chapter.

The book contains one hundred and nine illustrations, a few of which are of real scientific value; many are sensational, and some burlesque.

In conclusion, we regret that the book is not in our judgment such as we should expect to emanate from one occupying such a distinguished position in the profession as our author holds.

D. R. B.

CHEMISTRY: GENERAL, MEDICAL AND PHARMACEUTICAL. By *John Attfield, Ph.D.* Seventh edition. Philadelphia: Henry C. Lea.

The enviable reputation already gained by this standard work will certainly be much increased by the many improvements incorporated in the new edition that has just appeared. A number of valuable, well executed illustrations of chemical apparatus have been added, the recent changes in the nomenclature of the United States Pharmacopœia are duly noted, and

the whole work revised so as to be abreast with the many late discoveries in chemical science. At the same time the thoroughly practical character of the previous editions is still maintained — a matter that will be appreciated by busy practitioners, who, as a rule, seek from chemistries useful facts and not the discussion of unproven theories. To them the well-written chapters on toxicological testing and urinalysis will be of especial value; indeed, all that portion of the book devoted to analytical work is excellent, and by itself alone is worth the price paid for the volume.

We are surprised, however, in a work as generally accurate as Prof. Attfield's, to find so glaring an error as that which occurs on page 481, in connection with the important subject of testing for albumen in the urine. The statement is made that the urine, previous to boiling, must be acidulated, and for this purpose nitric acid is recommended in preference to acetic. Now, it has repeatedly been pointed out by the best of chemical authorities that urine, holding in solution a not over large quantity of albumen, will frequently fail to show any trace of that substance, if before boiling it has been acidified by nitric instead of acetic acid. We know of at least one instance in which ignorance of this fact led an eminent professor of clinical medicine to declare a patient free from albuminuria, when in reality that condition existed to a well marked extent.

All things considered, however, Attfield's Chemistry, in its present revised and improved form, is certainly one of our very best medical chemistries, and we take pleasure in recommending it to the profession and to students of medicine as a very valuable book of reference.

W. S. H.

THE STUDENT'S GUIDE TO DENTAL ANATOMY AND SURGERY. By *Henry Sewill*, Member of the Royal College of Surgeons, etc. Philadelphia: Lindsay & Blakiston. 1876.

This little book of two hundred pages is a model in its way. Designed for students of dentistry, and condensed into the space of a manual, it is written by a scholar and an expert in his department, and would repay a perusal by any surgeon or student of surgery. It must be invaluable to those students

of dentistry who desire to be scientific men — as we are glad many of them at this day are.

SURGERY OF THE ARTERIES; BEING THE LETTSOMIAN LECTURES OF THE MEDICAL SOCIETY OF LONDON, 1875. By *C. F. Maunder*, Surgeon to the London Hospital, etc.

This contribution to surgery, of 202 pages, is composed of three lectures. The time allotted for their delivery was so short as to restrict the author, in a great measure, to his own personal experience. He has been obliged, therefore, to leave untouched many points of interest pertaining to his subject. The first lecture is devoted to aneurisms; the second to wounds, hæmorrhage and the antiseptic ligature; the third to the ligation of a main artery to arrest acute traumatic inflammation. In his first lecture we find the details of cases of aortic, carotid, axillary, inguinal and popliteal aneurisms of these arteries, with their anatomical relations and the operations of ligation called for when thus affected.

The result of Robert Holmes' inquiries concerning the compression treatment will lead us, says Mr. Maunder, to be more discriminating in the selection of the means of cure to be tried first, as well as the time during which compression may be continued, it having been shown by the former that the mortality from ligature, after compression has failed, is ten per cent. greater than where the Hunterian operation has been performed at once. And after a still more extended observation of popliteal aneurism, the author repeats what he published in 1869, viz.: "The mode of treatment I advocated for the cure of popliteal aneurism and all other suitable cases, is moderate compression, alternating with relaxation, say for a fortnight, with a view, partly, if thought desirable, of promoting a more free collateral circulation in the limb; and at the expiration of this time *continuous* compression, either digital or instrumental (completely obstructing the artery), maintained under chloroform or opium, if necessary, for a period varying from six to twelve hours, or even longer, and assisted by a tourniquet on the distal side of the sac, if the first attempt did not succeed. Should a few sittings fail to

effect good progress in the cure of the aneurism, the ligature must be resorted to." This lecture closes with the following conclusions:

1. "That no aneurism is to be regarded as necessarily incurable."
2. "That some cases of internal aneurism are apparently cured by absolute and prolonged rest, restricted diet, and other medical treatment."
3. "That when possible, compression, either proximal or distal, is to be employed in addition."
4. "That in all aneurisms in which treatment by ligature is known to be a fatal operation, the above rules are to be first applied."
5. "That the treatment of progressive aneurism at the root of the neck, by the distal operation, is justifiable after medical treatment has failed."
6. "That in rare instances only may an aneurism be treated by ligature before compression has been tried and has failed."
7. "That digital is to be preferred to instrumental compression."
8. "That anæsthetics and morphia are valuable aids to compression."
9. "That chloroform will probably prove to be a more effectual agent than morphia in all cases, but the more hazardous."
10. "That the value of morphia should be more thoroughly tested."

In his lecture on wounds, etc., Mr. Maunder gives due importance to the flowing of venous blood from the distal side of a wound in an artery, as an indication of the means to be employed for the arrest of secondary hæmorrhage. Experience shows that repair can be more certainly expected to occur on the proximal than on the distal side of the ligature of an artery, and to know whence the blood comes is of the utmost value to the surgeon. Should it be arterial and proximal, little else than the application of a ligature higher up the trunk will suffice to arrest the bleeding occasionally.

The prognosis will be much more favorable if the blood be

of a dark color, when rest and the local application of cold and pressure will be effectual. One case is cited to prove that venous blood sometimes flows from the distal side of the wound, and one to illustrate the value of the color of the blood as an indication of the method to be employed. From the cases of hæmorrhage cited he draws various conclusions, from which we select the following:

VI. "That blood flowing from the distal side of a wound in an artery or ligature upon it, will in the lower extremity be often, in the upper extremity occasionally, venous in color."

X. "That both the axillary and the femoral arteries may be wounded, and a pulse be felt at the extremity of the limb."

XII. "That direct compression upon the bleeding point will often succeed *after* the main artery has been tied, though it failed *before*; and this fact is a justification for tying a main vessel."

Part of this lecture (second) is devoted to the use of the antiseptic ligature upon arteries in their continuity. Nineteen arteries are reported as tied antiseptically—four with the antiseptic silk ligature (silk soaked in carbolic acid solution), and fifteen with antiseptic cat-gut. In eleven of the latter, and in all of the former, the behavior of the ligature was satisfactory. The four remaining ligations with the cat-gut furnish evidence adverse to this variety of ligature. Mr. E. Watson, for popliteal aneurism, applied an antiseptic cat-gut ligature in Hunter's canal, but without arresting pulsation beyond a few seconds. Five days later a similar operation was performed upon the ext. iliac artery. A month later the patient died, after amputation. The latter vessel, when slit up, had its lining smooth and unbroken, and there was no evidence of diminution of the caliber of the vessel. No trace of the cat-gut was discovered. The opinion entertained was that the ligature did not confine the vessel for more than a few hours—sufficiently long, however, to produce a partial coagulation of blood in the sac, since the pulsation never returned.

At the site of the ligature upon the artery in Hunter's canal the coats of the vessel were deeply reddened, and it was filled with an adherent clot; yet its caliber was not diminished.

There was no trace of the cat-gut ligature. Mr. Spence used the cat-gut ligature on the common carotid. The next day the patient suddenly became comatose and paralyzed on the left side. Upon examination this artery was not in the slightest degree constricted at the point of deligation. The ligature was found with difficulty, and so gelatinous and pulpy that a portion of it, when placed between two slips of glass, spread out like a fluid. An embolic clot plugged the middle cerebral artery. The internal coats were cut through; but when the ligature softened, the force of the circulation distended the vessel, and forced the recent clot onward into a vessel of the brain.

Although Mr. Spence uses the cat-gut to tie arteries in amputation, removal of tumors, etc., he would not again use it to tie a large continuous trunk for aneurism. He now, for large arteries in amputation, uses cat-gut for the upper ligature, close to the soft parts, and dentist's silk for the lower, near the open mouth of the vessel. We fail to see any advantage in this double ligation of a vessel, especially when one of these ligatures is silk.

In the fourth case (Mr. Holden's) the patient died of hæmorrhage on the eighth day subsequent to ligation of the femoral in Scarpa's triangle, antiseptically with cat-gut. Not a trace of the ligature could be found. The hæmorrhage had taken place through a jagged perforation at the site of the ligature. The inner and middle coats were fairly divided, yet there was no clot, the vessel being pervious throughout. The cat-gut loses its constricting power, not by slipping, but by softening. With such evidence we must endorse the author's only conclusion, "that the fate or behavior of a given antiseptic cat-gut ligature, applied to the continuity of an artery, cannot be foretold."

The concluding lecture is devoted to "the ligation of a main artery to arrest acute traumatic inflammation." This operation was suggested by the author as a novelty in 1867; but he subsequently learned, and duly acknowledged the fact, that the operation originated in our own country. We have only space for the author's conclusions:

1. "That ligature of the superficial femoral artery has arrested acute inflammation consequent on wound of the knee-joint."

2. "That ligature of a main artery will generally diminish profuse suppuration, and prevent death by exhaustion."

3. "That while it arrests profuse suppuration, it will, by allowing the patient to gain strength, afford an opportunity for amputation at a future time."

4. "That gangrene and secondary hæmorrhage, as the result of ligature, should not be anticipated in the healthy subject."

5. "That a dread of these has arisen from our knowledge of the consequences of the ligature in instances of known diseased vessels."

6. "That a slough on the heel, caused by the pressure of a splint, was quickly detached, and the wound soon closed, although the superficial femoral had been tied a few days previously."

7. "That the arterial tension of the rest of the body will be increased beneficially by the ligature."

J. E. O.

BOOKS AND PAMPHLETS RECEIVED.

A Treatise on Hernia; with a new process for its Radical Cure, etc., etc. By Greenville Dowell, M.D., etc. 1876.

Yellow Fever and Malarial Diseases, embracing a History of the Epidemics of Yellow Fever in Texas, etc., etc. By Greenville Dowell, M.D., etc.

Modern Therapeutics; A Compendium of Recent Formulæ, Approved Treatment and Specific Methods in Medicine and Surgery. By Geo. H. Napheys, A.M., MD., etc. New edition. 1877.

Contributions to Reparative Surgery. By Gurdon Buck, M.D., etc.

On Coughs, Consumption, and Diet in Disease. By Horace Dobell, M.D., etc. Edited by D. G. Brinton, M.D. 1877.

Clinical Studies illustrated by Cases observed in Hospital and

- Private Practice. By Sir John Rose Cormack, K.B., etc.
Two volumes. 1876.
- Liver Complaint, Nervous Dyspepsia and Headache, etc. By
M. L. Holbrook, M.D., etc. 1876.
- Lectures on the Physical Diagnosis of Diseases of the Heart.
By Arthur Ernest Sansom, M.D., etc. 1876.
- Ophthalmic and Otic Memoranda. By D. B. St. J. Roosa,
M.D., etc., and E. F. Ely, M.D., etc. 1876.
- Walsh's Physicians' Combined Call-Book and Tablet. Second
edition.
- A Report on the Death-rate of Each Sex in Michigan, etc.
By H. B. Baker, M.D., etc.
- Prescription and Clinic Record, with Blanks for Prescriptions.
Prepared by E. Seguin, M.D.
- Annual Report of the Surgeon General U. S. A. 1876.
- International Uniformity in the Practice and Records of
Physic. By E. Seguin, M.D.
- Transactions of the Colorado State Medical Society. Sixth
Annual Convention. 1876.

Medical News and Items.

The *Annual Meeting* of the Stockholders of the *Chicago Medical Press Association*, was held Dec. 5, 1876, at the Grand Pacific Hotel. Drs. W. H. Byford, T. D. Fitch, and J. E. Owens were elected Directors for the ensuing three years, to fill the vacancies, by limitation, of Directorships held by Drs. Byford, Hamill and Bevan. Reports from the President, Treasurer, Secretary, Librarian and Editor, were submitted. The affairs of the Association are in as good condition as can be reasonably expected at the present time. The library contains nearly three thousand books, pamphlets, and journals. The prospects for greater increase in accumulation of medical literature are flattering. The Directors hope soon to have a complete set of the New Sydenham Society's publications, numbering about eighty volumes of very rare books, at a small

outlay of money. The number of medical journals regularly received is now one hundred and seven. The list of foreign journals is continually increasing. The latest publications in the line of medical books and pamphlets are all received, and thus the library, the great objective point of the Association, is steadily increasing in worth.

The most reliable feature of this collection of medical literature is an immense Index Rerum (consisting of a large volume for nearly every letter of the alphabet), which is being written up by the Librarian, Dr. Bridge, and a corps of able assistants, selected from among the rising young physicians of Chicago. Every original communication in the journals received is indexed, and, when one considers that at least five hundred such entries are made every month in the Index, it can readily be seen what an invaluable work is steadily being prepared for the present and future generations of medical writers and students in Chicago.

Arrangements are now in contemplation, which if executed, will place the library in well lighted and warmed rooms, in charge of an Assistant Librarian, day and evening.

The *Tri-State Medical Society* of Illinois, Indiana and Kentucky, held its second annual meeting at Vincennes, Ind., on November 21, 22 and 23, 1876. The meetings were well attended. The following papers were read and discussed and will be incorporated in the printed transactions of the Society: On the use of Ergot, by Dr. W. H. Smith, of Newman, Ill.; The Solution and Absorption of Medicines, by Dr. J. W. Camp-ton, of Evansville, Ind.; Report on Obstetrics, by Dr. Ireland, of Louisville, Ky.; On Treatment of Diseases of the Larynx and Vocal Cords, by Dr. B. Tauber, of Cincinnati, O.; On Nervous Diseases of the Eye, by Dr. Dickinson, of St. Louis, Mo.; Treatment of Catarrhal Affections of the Nose and Ear, by Dr. Thos. Reimbolt, of St. Louis, Mo.; Traumatic Tetanus, by Dr. Ezra Read, of Terre Haute, Ind.; The Second Decade of Life, by Dr. W. H. Byford, of Chicago; Medical Education of Europe and America, by Dr. J. O. Stittson, of Bedford,

Ind.; The Pneumonia of the Wabash Valley, by Dr. J. B. Armstrong, of Terre Haute, Ind.; Conjunctival Diseases, by Dr. J. P. Worrell, of Terre Haute; Puerperal Peritonitis, by Dr. G. W. Burton, of Mitchel, Ind.

The committee on nominations made the following report of officers for the ensuing year :

For President, Dr. W. H. Byford, Chicago, Ill.; 1st Vice President, Dr. John L. Dismukes, Mayfield, Ky.; 2d Vice President, Dr. G. G. Barton, Washington, Ia.; 3d Vice President, Dr. H. H. Deming, Pana, Ill.; Recording Secretary, Dr. G. W. Burton, Mitchel, Ind.; Corresponding Secretary, Dr. F. W. Beard, Vincennes, Ind.; Treasurer, Dr. H. Patten, Vincennes, Ind.; and the Society then adjourned to meet in the city of Evansville, Ind., on the third Tuesday in Oct., 1877.

The new *Cook County Hospital* has been occupied now several months. Its furnishing and appointments are nearly perfection; the beautiful wards with new furniture—and such furniture—and bright bed-spreads, and clean floors, are a sight really worth beholding; it reminds us of a dress parade with a full regiment, new clothes and white gloves. Of course the time has been too short to get everything running smoothly, but we are sorry to hear so soon complaints regarding the management. There are, we are told, six engineers in the establishment, and yet in the surgical wards in one day, the temperature is allowed to fall from 98° to 38° F., because these poor engineers must sleep. The charges of mismanagement made by patients through the daily prints of late, we forbear discussion of in this place—doubtless something may be said on both sides. The amphitheatre is expected to be ready for occupancy by the time this journal is delivered to its readers.

The following letter to the Physicians of the State of Maine, is self explanatory :

PORTLAND, ME., 15th of November, 1876.

DEAR SIR : At its August meeting, the attention of the

CUMBERLAND COUNTY MEDICAL SOCIETY was called to an alleged "Opium Antidote," which a member had found to contain morphine, and the undersigned were appointed a committee to obtain a quantitative analysis of the preparation. While this investigation was proceeding, another so-called "Opium Antidote" was brought to the notice of the committee, and was subjected to a similar examination.

The first specimen, manufactured by Mrs. J. A. Drollinger, of La Porte, Indiana, was analyzed by Walz and Stillwell, Chemists, New York City, who found it to consist of glycerine colored with aniline red and containing in solution 1.383 per cent. by weight of the sulphate of morphia—about seven grains to the ounce.

The second was the preparation of "Dr. S. B. Collins, the great Narcologist of the Age," of La Porte, Indiana. The analysis of this was made by Dr. Henry Carmichael, Professor of Chemistry in Bowdoin College and Assayer of the State of Maine; and differed from the preceding only in the amount of the sulphate of morphia shown to be present, namely, 3.2 per cent. A teaspoonful (a dose frequently prescribed by the proprietor) would contain almost two grains of the morphia—nearly twelve times the ordinary medicinal dose.

The Society instructed the Committee to publish the result of the investigations, in order that the large number of opium-eaters in this country who are earnestly striving to overcome their health-destroying habit, may be seasonably warned against these widely-advertised nostrums, which, while promising a safe and sure cure, only serve to increase the appetite for opium until it finally becomes unconquerable.

This circular is sent to every physician and editor in the State of Maine, and to many other persons of prominence and influence, who will be able to give wide publicity to these facts and thus help diminish the prevalence of the opium habit, which is yearly destroying great numbers of our people. Opium eating is usually practised without the knowledge of friends, and the attempts at cure are often equally secret; therefore the information which has been acquired concerning these dangerous preparations must be extensively disseminated

in order to certainly reach those for whose benefit only it was sought. Will you assist in the work by making known these facts in your neighborhood?

FREDERIC HENRY GERRISH, M.D., }
 GEORGE F. FRENCH, M.D., } *Committee.*
 THOMAS A. FOSTER, M.D., }

THE MICHIGAN STATE BOARD OF HEALTH.—This must be a thrifty organization. We have received an abstract of their October meeting, and notice that Dr. Kedzie presented a paper on the "Water Supply of Michigan," wherein he treated of the geological formation of the State as affecting the water supply, the mechanical and chemical effect of different kinds of soil on the water filtered through them, of the impurities in water supply, of grave yards and their sources of impurities, and the methods of improving the quality of water now used; that Dr. Hazelwood read a paper on "Water," based largely on replies of correspondents to a circular of the Board; that Dr. Baker read a paper on the "Causes of Chorea;" that Dr. B. also presented material for a paper on the "Death Rate as Influenced by Age, Climate, etc.," and that Dr. Hitchcock read a paper on "Criminal Abortion," showing that the existing laws of Michigan are based on the views of past ages, and are not in conformity with the present knowledge of physiology.

DR. BRUNET has recently published an interesting work on Polynesia, in which it is stated that version, by external manipulation, has been practiced by the midwives of that country from time immemorial. The vaginal touch is interdicted. The operation is performed at the onset of labor and before the rupture of the pouch of water, and is successfully accomplished. On two occasions when the doctor had convinced himself of the position by auscultation and palpation, and there was presentation of the right shoulder, the dorsum being anterior, the maneuvers of the midwives were successful

Summary of Progress in the Medical Sciences.

I. ANATOMY.

1. *A Living Specimen of Human Pygmelia—or a Woman with Three Legs.*
[Di un caso vivente di Pygmelia umana osservato in Roma.]
ANGELO INCORONATO. (Extract from the proceedings of the Royal Medico-Chirurgical Academy of Naples, 1876.)

Mad. Blanche, when examined by the author, was twenty-six years old. She stated that her mother had had children both older and younger than herself, all of whom were normal in organization, and enjoyed perfect health. As in most of such cases, the pregnancy preceding the birth of Blanche had presented no anomaly, and the labor was not unusually painful or tedious.

In person, the subject of this sketch was found to be slightly below the average stature of females; her countenance had a happy and agreeable expression, which did not denote physical suffering; her head was rather large, the face presenting a slight reentrant angle between the forehead and the chin. The tint of the skin was that of the delicate "pink and white" complexion; the hair abundant; the lips full, red and expressive; the neck well turned and white; the breasts of moderate size and regular conformation, provided also with nipples and areolæ which resembled those of a girl fifteen years old. But the pelvis was disproportionately broad, the distance between the two anterior superior iliac spinous processes being increased—the right on a lower level than that on the left, due to pelvic obliquity. In consequence, the abdominal integument was stretched like a tense drum-head, and the abdomen, instead of projecting, remained flattened and depressed. A single umbilical cicatrix appeared in the median line, the pubis being also single, though broad and of unusual extent. The genital organs were double—each that of the female—disposed, one set on each side of the axis of the body. The left vulvar aperture was the larger, and permitted the introduction of the index finger; that on the right would scarcely admit the little finger; both were surmounted by a growth of hair, more abundant on the left side. In each vulva appeared a clitoris and corresponding meatus urinarius with a circular hymen—the latter forbidding further exploration with the finger; and the author was not permitted to use the sound or any other instrument in his examination. The urine was simultaneously voided from the two urinary apertures; and it was further stated that the menstrual blood was discharged from the two vulvæ simultaneously, and from each in about the same quantity.

Behind the left genital fissure, and at a normal distance, was found the sole anal aperture. Behind the right vulva there was no opening of any sort; but at a distance of about five centimeters, in a line passing upward to the dorsum of the ilium, was a cylindroid cutaneous appendix, about

two centimeters long, insensible to the touch, impervious, always flaccid, and never rigid or turgid. In a careful palpation of this appendix, the fingers detected the origin of two filaments or small cords, having the feel of spermatic cords enlarged by circocele, which, even upon rude handling, did not give rise to a painful or disagreeable sensation. On the promontory of the pubis, but much removed to the right side, was a third breast—abdominal or better inguinal in site—provided with nipple and areola quite insensible to the touch, becoming turgid on gentle friction, but without producing such reflex sensations as those effected by irritation of the thoracic mammary glands. To complete the history of the examination of the trunk, it is only necessary to add that the spine was normal from the cervical to the lumbar vertebrae, but the sacro-coccygeal region was much larger than usual, and terminated below in two diverging and completely ossified points. At the prolongation of the right coccygeal apex, a large pyriform tumor was situated, its greater diameter in continuity with the vertebral axis. This tumor was insensible to any external impression, and possessed the elasticity of a lipoma.

Two limbs supported the trunk, while a third, which was situated between the former, did not aid either in the retention of position or progression; it was affected with partial ankylosis of the knee-joint, and could not be placed upon the ground. This angular semi-ankylosis only permitted a *diminution* of the angle of 90° at the knee, without allowing its increase—hence the heel could touch the nates but not the floor. It did not appear to have a true articulation with the trunk, but rather to be implanted upon it like a tumor; nor could it be extended or moved voluntarily, as it was necessary to use the hand in bringing it either backward or forward. In its superior (or thigh) segment, it was quite large, and through its soft parts the fingers could detect a well developed bone, corresponding neither to that of an athletic man nor of a young girl. The integument covering the condyles of the knee was not provided with sufficient fat to give it a rounded form; it was therefore nodose in contour, and the leg also was thin and lean, as if deprived of its soft parts. The skin scarcely sufficed to cover the bone, which was quite large—not double—but the representative of an enormous misshapen tibia. The attached foot, which was affected with varus, was flexed upon the leg, and held in position by a strong ankylosis; it was emaciated, and terminated in five clubbed and twisted toes, the great toe pointing to the left heel; therefore the foot was regarded as belonging to a right leg. Its temperature was decidedly lower than that of the other limbs, and even lower than that of the tumor and cutaneous appendix described above.

The other two limbs which sustained the body were somewhat irregular and differed, each from the other. The right was much the more shapely; its muscular masses were clothed with adipose tissue and normal integument, and its rounded form differed from that of the rest of the body, especially in its upper portion. The foot terminated in five toes, the great toe pointing inward, and exhibiting no deformity. Yet the great trochanter of the femur was excessively developed, and the articular head of the bone,

instead of being enclosed in an acetabulum, seemed to rest in a pseudo-articular cavity, constituted by the external iliac fossa. The left limb was much smaller and shorter than that just described; and this fact, in connection with the abnormal right coxo-femoral articulation, seemed to the author to explain the obliquity of the pelvis, which brought the anterior superior spines of the ilium into different planes. The leg was excessively small, disproportioned to the size of the thigh, which had a more regular conformation. The foot of this limb also was varus, as that of the median extremity, and turned inward to such an extent that the point of the foot was directed posteriorly. When touching the ground it rested exactly upon its internal border, this position having produced a dense callosity over the cuboid bone by the consequent pressure in that region. The foot terminated in five distorted and ankylosed toes, the great toe pointing inward. This limb differed also from the others in the extent to which it was capable of being removed from and approximated to the others—a circumstance readily seen when the subject walked with feet exposed.

The author critically analyzes the phenomena described above, and finds that Mad. Blanche belongs to the family of monsters called *potimelici*, of the genus *pygomeles* or *epipygus*; that is, there existed two primitive beings, which became united by the sacrum and coccyx—one attaining its development through the phases of evolution, the other arrested in development, but still exhibiting duplicity of the sexual organs, a supernumerary limb and other anomalies of the body—a species of monstrosity rare in mammals, especially in man, though frequently encountered in birds.

After sketching the probable course of development from the germinative area, the author proceeds to show that there was a union of two pelves; four ilia and two pubic and sacral bones; complete or partial resorption of the two internal ilia; solidification of the two sacral and coccygeal parts; and hence no articulating surface for the third limb, whose muscles became consequently the subject of fatty degeneration and inertia. The median and left limbs thus corresponded to an individual formed on the left of the axis of fusion; the right to an imperfectly developed individual on that side of the axis. The feet of the two first named were both affected with varus; the last was the most normal in size and shape. On the left also was the sole anal aperture and the best formed genitalia. On the right, it is true, the genitalia were not wanting, but the third breast, the cutaneous appendix and the pyriform tumor, all showed the irregular distribution and development of a primitive plastic material.

In all probability the pyriform tumor was the nucleus or rudiment of a left leg of the imperfectly developed individual on the right side. The cutaneous appendix could only be explained as an instance of exuberant plastic material, viciously disposed and directed. As to the internal genitalia, the simultaneity of the emission of urine and menstrual blood might be explained by supposing single, double or bicorned uterus, as well as single or double bladder, for the unicity of the spinal cord and nervous center presiding over these functions, would, in any event, supply the explanation of this peculiarity.

II. PRACTICAL MEDICINE.

1. *Disorders occurring to a Laborer in a Manufactory of Aniline.* FREDET.
(*L'Union Médicale*, No. 119.)

A man, thirty-seven years old, was employed in a laboratory where he inhaled the vapors of nitro-benzine and aniline. Before engaging in this work he had enjoyed perfect health. In the course of nineteen months he suffered from vertigo, malaise and vomiting, for which a purgative was ordered—the routine treatment among artizans of this manufactory, as soon as the sclerotic assumes a yellow hue and the gums become blue. The hours of labor were from 6 A. M. to 6 P. M., with necessary intervals for meals.

Upon admission to hospital he was found to be pale, his tissues puffy, the sclerotic of each eye subicteroid in color, gums blue without ulceration, numerous purpuric blotches on the legs, and pustules of ecthyma upon the internal faces and upper portions of the thighs. There was also œdema and a furuncular eruption over the malleoli, eczema, hemeralopia, general feebleness and difficulty in progression. A bruit was audible over the large vessels of the neck, simultaneous with the first cardiac sound. Pulse feeble and slow; no albumen in the urine; saburral condition of the primæ viæ; frequent stools and thirst.

These phenomena are due to the action of more than one poison—nitro-benzine, aniline and arsenic. At first there was vertigo, malaise, etc., due to the vapor of nitro-benzine; then followed the gastric disturbance and nervous depression, due to the aniline; finally, the furuncular and pustular eruption, with the eczematous affection, arose in consequence of subjection to the arsenical influence.

2. *Chylous Urine.* ROBIN. (*Le Progrès Méd.*, November 25, 1876.)¹

Robin exhibited to the Anatomical Society the chylous urine voided by a lady, each morning only, for three years. Decubitus consequently seemed to have some influence upon its production. The microscope showed cellular *débris*, delicate granules having amœboid movements, but no drops of fat. The urine contained no albumen, no sugar, and but one-third of the normal proportion of urea.

In the discussion of the specimen which followed, it was asked whether hæmaturia had previously existed. Crevaux having shown that in warm countries chyluria occasionally alternated with hæmaturia, Renant remarked that in chylous urine there was in general a distinct diapedesis of red and white blood globules, but in an abnormal proportion. Parasites were also occasionally discovered. The physicians practicing in warm latitudes have noticed, besides, varices of the lymphatics of the groin and scrotum, and even elephantiasis; and these lymphatic alterations have been ascribed to a parasite of the genus *filaria*.

Robin remarked that the saline constituents of this specimen of urine seemed closely analogous to those of chyle.

3. *Regeneration of Nerves after Neurotomy.* MITCHELL AND BERTOLET.
(*Amer. Jr. M. Sc.*, April, 1876.)

From an injury in the median territory of the right palm of a Miss T., there occurred intense neuralgia, which no treatment improved. In November, 1871, Dr. Sapolini "cut down on the musculo-spiral nerve" "and removed one inch of it. This operation eased the neuralgia, which, however, came back in eight days suddenly." Atrophy of the extensor group of the forearm, with loss of power to extend the wrist, and in the common extensor of the fingers, resulted. The loss of sensation in the hand was small. In six months the wasted muscle began to enlarge again and the power, to return. In February, 1873, she could partially extend the hand, and "there was normal touch in all the radial region in the hand." In March, 1873, Dr. Mitchell had Dr. Brinton (J. H.) cut down and remove three-fourths of an inch of the median nerve in the forearm of this patient, in the hope of stopping her suffering. "The lower end of the cut nerve was doubled upon itself, and secured by a thread, to prevent reunion," and "the interval betwixt the nerve ends became by measure two and a half inches." In January, 1874, pain began in the line of the incision over the musculo-spiral nerve, and soon excessive pain in the radial region of the back of the hand. Swelling pain and redness occurred, and an abscess was looked for, but it did not occur. To relieve the constant torture of the patient, and fully believing the cut nerve had reunited, Dr. M. had Dr. B. cut down through the old incision and again remove a portion of the nerve. The nerve was found to have become re-united, two small swellings indicating the site of the two ends of the cut nerve. The operation was soon followed by perfect relief, which a year later had continued. Dr. M. thinks this case is the first one recorded "in which a nerve once cut has after repair been cut a second time, so as to remove the restored portion." Here nerve repair must have occurred within six months after the operation, as shown by the restoration of the wasted muscles. "Before we cut the median, and since, I frequently faradized the musculo-spiral nerve above the section, and threw the extensors into play." During the second operation, and when the nerve was laid bare, he repeated the test by putting the conductors on the exposed nerve itself.

Dr. M. thinks this case further proves the theory which he holds to, that if a single nerve be left uncut in a member, some sensitiveness will remain over the whole of the part, which will gradually improve. He believes this gradual return of power to occur through the coarse and fine anastomosis of the nerve fibers. This power "comes slowly, and we learn by degrees to use the new channels." In the case under consideration this gradual increase in sensitiveness was a marked peculiarity, while the paralysis in many muscles of the hand was complete and permanent after the two operations of Dr. B.

Two cases are quoted from Dr. Hodge where cicatrices of former nerve sections were cut down upon, and the nerves found re-united. In each instance, too, there was the enlargement at the site of the cut end of the

nerve. In one of these cases an inch, and in the other two inches, of nerve was excised.

In Dr. M.'s case "microscopical examination showed the central enlargement to consist almost entirely of double contoured nerve fibers, which interlace and cross one another in every possible direction." There was a moderately increased quantity of connective tissue. The distal enlargement presented the same histological features. "Horizontal and vertical sections of the intermediate portions of the nerve, between the neuromatous swellings, are indistinguishable from those obtained from a perfectly normal nerve; thus showing how complete has been the regeneration of the excised part."

The cicatricial neuromata in this case resemble those of the lower animals under similar circumstances; there, as here, the central swelling is always the larger. Dr. B. believes the evident increase by segmentation in the nuclei of the neurilemma in this case, "leaves little room for doubt that also in the human subject these nuclei are the principal factors in the reproduction of divided nerves." He has experimented upon several kittens, dividing the ischiatic nerves and watching the process of repair. The results are confirmatory of the observations of others. The power of regeneration is stronger the younger the animal.

The first traces of regeneration show themselves a few days after the ligation of the nerve. The commencement is due to the active proliferation of the nuclei of the neurilemma. "They multiply by segmentation, are arranged in rows and surrounded by a layer of protoplasm; have roundish, oval and even spindle forms. This proliferation is seen in the central swelling and throughout (Benecki) the peripheral end of the nerve; the increased nuclei elongate into long spindles, the medullary substance disappearing. These spindle-shaped nuclei send out long filamentous protoplasmic processes, which unite with one another and widen into narrow bands. These fibers are next surrounded by a second 'glittering contour.' These short cylinders gradually blend into one continuous medullary sheath. The nerve sheath being next filled out at all points with medullary substance around the axis-cylinder, present a uniform width throughout, and the regenerative process is now complete."

"The reunion of the separate nerve ends, in cases of excision, does not take place by the primitive fibers of the central and peripheral ends simply growing toward each other," "but is brought about by the coalescence of spindle cells, arranged in rows in the intermediate cicatricial portion, which, at the same time, unite with the primitive fibers of both ends."

III. SURGERY.

1. Percussion of the Bones. LUECKE. (*Centralbl. f. Chir.*, 1876, No. 43.)

The percussion of the bones may be employed for a two-fold purpose, viz.: either to ascertain a painful place in the bone, or to diagnose patho-

logical changes in its texture by the alteration of the normal sound of the bone. For the first mentioned purpose the percussion has, long since, been practiced; but we must give it greater attention, since we begin to surgically treat central affections of the bones, before they can injure the neighboring structures. In order to find most accurately the painful spot, we can, for this kind of percussion, use our fingers or small percussion hammers; but we must never omit to compare the result with the sound side, because of the great variation of sensitiveness among patients.

The second object of the percussion of bones is to ascertain an acoustic difference between a diseased and healthy bone. The long bones of the extremities afford the best conditions for this study. The like bones always show the same sound; but the epiphyses give a higher sound than the diaphyses. A recently united fracture indicates by a lower pitch of its percussion sound the occlusion of its central cavity and the presence of an abnormally thick mass of bone. Chronic osteitis of the epiphysis makes its sound lower, while a tibia which had become very porous yielded a remarkably higher sound than the normal tibia of the other leg.

The percussion of the extremities is executed while they are raised from the bed or table.

2. *Cheap Antiseptic Dressing.* BALFOUR. (*Ed. Med. Journal*, Aug., 1876.)

Dr. B. uses sulphurous acid, one part to twelve of water, as a constant lotion and dressing for wounds. He claims from it alleviation of pain, diminished suppuration, prompt healing, ease of application, and cheapness. Three cases are quoted in endorsement. J. S. K.

IV. OBSTETRICS AND GYNÆCOLOGY.

1. *On the Weight of New Born Infants.* INGERSLEV. (*Revue des Sciences Médicales*, Oct. 10.)

The average weight of 3,450 infants at term, ascertained by the authorities of the lying-in asylum, at Copenhagen, was 3,333.5 grammes. Of this number 1,833 boys had an average weight of 3,380.6 grammes; and 1,617 girls showed an average weight of 3,279.7 gr. The boys therefore exceeded the girls in weight by an average of 100 gr. Of 19 children—13 boys and 6 girls—the weight varied between 9 and 10 pounds. One boy alone exceeded 10 pounds, weighing 10½.

1,723 children of primiparæ weighed, upon an average, 3,254 gr., and 1,727 children of multiparæ, 3,412 gr.; that is, the average weight of the latter was greater by 158 gr.

Mothers less than 19 years old seemed to bear lighter children than the others. Consulting one table in which the age of the mother is stated irrespective of the number of pregnancies, it is apparent that the weight of the newly born increases with that of the mother up to the 40th year. From the 40th to the 48th year the weight of the children again diminishes.

In order to ascertain the influence of a number of pregnancies, the author has prepared a table of the average weight of newly born children for the different pregnancies, irrespective of the age of the mother, indicating, however, the average epoch at which their pregnancies occurred. It is here apparent that the weight of the children increases with the number of pregnancies. There is, however, an exception in the case of girls born at the third pregnancy; but at the fourth and fifth their weight resumes its normal progression. Yet, since the age of the mother increases with the number of pregnancies, the increase in the weight of the child might be attributed to that circumstance.

After birth for a few days the infant loses its weight. Yet an increase may be noticed on the first day if the meconium is retained (which is ordinarily evacuated before the first weighing) or if the infant has been put to the breast. But this is a mere transitory increment, and the loss of weight is established at the second or third weighing. It is equivalent to one-fourteenth or one-fifteenth of the total weight, and is relatively and absolutely more considerable in the children of primiparæ, and in boys rather than girls. The latter, however, make up the loss more rapidly than the former. The initial loss is greater according as the child lacks vigor, and correspondingly the subsequent increase is more slow. The same is true in all children prematurely born.

The increment begins on the fourth (some authors say on the third) day. The causes of the loss of weight are: first of all, the evacuations; next, the condition of alimentation and assimilation. The meconium and the urine represent, at the most, the half of this loss; while the other must be produced by the operation of some other cause. It cannot be due to insufficient alimentation, since the richest alimentation cannot prevent it.

NOTE BY THE EDs.: The second factor referred to above as a cause of the loss of weight, must be the evaporation from the cutaneous surface. The unborn fœtus is an aquatic animal whose life is sustained while the body is immersed in a fluid medium of a high temperature. The effect of a sudden removal to a different medium of a different temperature is the evaporation of a large quantity of watery vapor from the surface and the moist tissues adjacent to it, as well from the skin as the lungs. It must be remembered that the pound referred to above, is the French metrical pound, equivalent to 500 grammes, or about 1 pound, 1 oz. and 10 drachms avoirdupois.

2. *Dangers of the Pessary.* NOTTA. (*L'Union Médicale*, Nov. 14.)

Several cases were reported. In the first, a woman 58 years old, afflicted with uterine prolapse (the organ projecting from the vulva) was immediately relieved by the application of the pessary. Soon after she fell accidentally, and the weight of the body came full upon the pessary. She suffered severe pain, which was followed in a few days by incontinence of urine. The pessary had penetrated into the bladder, and was withdrawn

from the latter by Liston's forceps. Considerable loss of substance ensued and a permanent vesico-vaginal fistula.

A second woman, 35 years of age, had some insignificant disorder six months after the birth of her ninth child, for which she consulted a charlatan. He applied a Gariel pessary, which produced violent vaginitis with a very profuse and fetid muco-purulent discharge. The pain and the abundance and horrible odor of the discharge finally became insupportable, and as she found no relief from the advice of the would-be surgeon, she applied to Notta. He discovered an abscess which perforated the abdominal parietes, and was followed by an intractable fistula.

Another woman had granular endo-cervicitis with some hysterical symptoms, which improved under the author's cauterization and hydrotherapy, when by the advice of a neighbor she consulted the same charlatan. He applied the Gariel pessary, as usual, and produced a peri-uterine phlegmon, peritoneal inflammation, with abscesses, which in six months destroyed her life. Notta was summoned near the conclusion of the case and the unfortunate woman narrated to him the history of her sufferings with her own lips. Notta proceeded at once to institute judicial proceedings against the malfactor.

V. THERAPEUTICS.

1. *Liquor Potassæ in Diphtheria.* SHALL. (*Boston Jour. Chem.*, June, 1876.)

This agent is considered by the writer the quickest solvent of the diphtheritic membrane. Twenty drops doses every three hours, in the first case in which liquor potassæ was used, after 24 hours' use of iron, potassic chlorate, ammonia, etc., was followed by an entire disappearance of the membrane and by defervescence. Its use is followed by uniformity of result, viz.: disappearance of membrane. While it is not considered a *specific* by the writer, it is declared extraordinarily useful. Dose, 20 drops every three hours, diluted largely, for adults; for minors, dose must be graduated.

2. *Ergot, Hypodermically, in Spleen Enlargement.* MILLER. (*Cin. Med. News*, 1876.)

The spleen, in the case reported, enlarged from malarial poisoning, occupied nearly all the abdominal cavity, extending into the right hypochondrium, and from the umbilicus into the epigastrium. Other remedies having utterly failed, ergot, hypodermically daily, reduced the organ to proper proportions in less than 10 days. Nearly a month later the reduction was found to be permanent.

3. *Wash to Prevent Bedsores.* (*New Remedies.*)

For this purpose Sir James Paget recommends a wash composed of one part sweet spirits of nitre, and three parts water.

J. S. K.

4. *Calabar Bean as a Galactagogue.* (New Remedies.)

In the *Bristol Medical Journal* of Oct. 28th, Dr. W. Monro remarks that he had already brought before the profession various uses to which Calabar bean might be put, from its power of dilating the peripheral blood vessels. Wishing, recently, to restore the secretion of milk after it had disappeared from the breast about three days, he had prepared an ointment of the strength of 20 grains of the bean to the ounce, and ordered it to be applied and washed off carefully before the baby was allowed to suck. After two applications, the baby not having been put to the breast in the meanwhile, the milk returned in full flow.

J. S. K.

5. *Lime Water in Infantile Eczema and Impetigo.* (Bulletin de Therap Southern Med. Record.)

It is especially useful in chronic cases of eczema of head and impetigo of face that have resisted other treatment. It is to be taken in quantities varying up to eight ounces, daily, according to age. If the secretions are very irritating dust the parts with carbonate of magnesia.

J. S. K.

6. *Sulphide of Carbon.* DOERING. (Pacific Med. and Surg. Journal, Oct., 1876.)

The following brief summary embodies the results the writer has obtained after an extensive trial with this drug:

1. Sulphide of carbon is particularly useful in all ulcers showing a tendency to spread, especially if of a syphilitic nature. It ought to be applied freely at least twice a day.

2. If no beneficial effect is observed after trial with this drug for a week, in any class of ulcer, it will be useless to continue its further application.

3. It is by far the best local application thus far presented to the profession in the treatment of that large class of ulcers termed indolent or chronic.

Sulphide of carbon is a transparent, colorless, exceedingly volatile fluid, of pungent, aromatic taste and very fetid smell. The mode of application is to lightly brush the surface of the ulcer by means of a camel hair pencil or piece of lint, and then cover the surface with some mild, unirritating powder, as subnitrate of bismuth or starch. The application generally produces severe pain, which, however, lasts but a few seconds.

J. S. K.

7. *Bromohydrate of Conia.* MOURRUT. (Répertoire de Pharmacie.)

M. M. states that this salt has been used with success in the treatment of whooping cough, in doses of one-twelfth grain, if necessary every hour, for a child three years of age; or one-thirtieth grain for a child of one year; or one-sixth grain for adults. Good results have also followed its hypodermic use in sciatica, in quantities of one-twelfth grain. The salt, when pure, occurs in colorless prismatic needles, soluble in water and alcohol,

less so in ether or chloroform, is odorless, nearly tasteless and deliquescent. Exposed to the light it turns red but does not decompose, should therefore be kept dark.

J. S. K.

8. *Conium*. HAMILTON. (*Med. and Surg. Reporter*, Nov. 4, 1876.)

Dr. H. says that in the treatment of diseases where tremor is a symptom much benefit has followed the use of conium at the Female Epileptic and Paralytic Hospital, Blackwell's Island. In two cases of chorea, of long standing, it produced a prompt amelioration of the patient's condition, and in the tremor of sclerosis it suppressed the movements for several weeks. It was given in the form of fluid extract in doses of 10 m., three times a day.

J. S. K.

9. *Ergot in Diarrhœa*. COMEGYS. (*N. Y. Med. Record*, Aug. 26, 1876.)

Dr. C. was induced thus to use this drug from a belief in its power in causing contraction in unstripped muscular fibre. If such were its action it would relieve the atony of the vessels of the intestinal mucous membrane, diminish hyperæmia by contracting the capillaries, and prevent the transudation of the watery part of the blood. To one patient, suffering from chronic diarrhœa of two years standing, 40 drops of fluid ext. ergot were given three times a day, and in four days the number of stools was reduced from eight to two per day. In 10 days the patient was quite recovered. A similar successful use of ergot in many other cases causes him to recommend the treatment to the profession.

J. S. K.

10. *Monobromide of Camphor*. GOSS. (*Med. and Surg. Reporter*, Oct. 28, 1876.)

The monobromide of camphor consists of one equivalent of camphor and one of bromine united (C_{10} , N_{16} , O, Br.). It is a white crystalline salt, having the odor of camphor and slightly that of bromine. The atmosphere decomposes it at a temperature of 100° F. W. A. Hammond has used it successfully in infantile convulsions from teething, dose one gr. each hour; hysteria, four gr. each hour; headache in females from nervous excitement or over study, one dose of four grains being sufficient for cure.

Dr. G. says in chordee, in doses of one or two grains each hour, it is a very positive remedy, one or two doses generally giving relief. In nymphomania there is no remedy equal to this compound salt of camphor and bromine. It is also a positive remedy in spermatorrhœa, nocturnal emissions with amorous dreams, in doses of three or four grains, at bedtime.

In cases of cerebral anæmia, from excessive venery, it calms nervous excitement; in debility, with cold extremities from feeble heart, it equalizes circulation—impressing the cerebro-spinal system. Dose, three or four grains three times a day.

In nocturnal incontinences of urine it is efficacious in doses of from one to six grains at bedtime.

(Best given dissolved in alcohol and glycerine, or suspended in mucilage and syrup as it irritates the stomach—J. S. K.)

11. *Viburnum Primifolium*. JENKS. (*N. Y. Med. Record*.)

The virtue attributed to black haw is that it prevents abortions by some sedative action upon the uterus, apparently the opposite of that of ergot. It has been used extensively for this purpose by Drs. Faris, of Miss., Jenks, of Detroit, and Bates, of New York. It is also useful in menorrhagia coming on during the menopause, and in cases of dysmenorrhœa when there is no mechanical cause of obstruction.

The method of administration is to give the fluid extract in doses of from one-half to one drachm a few days before and a few days after the menstrual period, or from two to four grains of resinoid in the same manner.

J. S. K.

12. *Bromide of Potassium as a Caustic*. PEYRAND. (*Canadian Journal of Med. Science*. Nov., 1876.)

M. Peyrand's first clinical experiment on the subject took place in April, 1874, when by means of daily applications of powdered bromide he effected the removal, within 28 days, of an epitheliomatous growth on the face. He has since had equally good results from this treatment of atonic ulcers of the legs; rapid cicatrization following the separation of sloughs following the application. In such cases he uses either the powder or an ointment of one part in five, or a mixture (one in ten) of glycerine. In many skin affections, as chronic eczema, pityriasis, and acne, in phagedæna, ulcerative stomatitis, and many other local inflammatory disorders, he has found it of use. As a local hæmostatic a solution of one part in fifty has served for epistaxis; and as a general hæmostatic its success in many cases of hæmoptysis and metrorrhagia was very marked where ergot, perchloride of iron and rhatany had failed.

J. S. K.

VI. SYPHILIS AND VENEREAL DISEASES.

1. *Syphilis of Pregnant Women*. DARVOSKY. (*Memorabilien*, 1876, No. 10.)

Although, as a rule, the heroic treatment of diseases ought to be avoided in women far advanced in pregnancy, the writer holds that syphilis should be an exception to this rule. He advises the inunction cure, to be pursued energetically but judiciously, so that salivation be obviated, and that the simultaneous internal exhibition of potassic iodide be employed. One-half drachm of the mercurial ointment to be rubbed in daily, scrupulous cleanliness, frequent gargling with chlorate of potash, and thorough ventilation of the room. Such is the doctor's method, which he is not afraid to apply even during the last month of pregnancy.

2. *Communication of Syphilis by a Midwife*. DARVOSKY. (*Memorabilien*, 1876, No. 10.)

A young woman, married one year, had been delivered of a healthy child eight weeks before. She had been healthy during her pregnancy, and in

her confinement nothing occurred to attract special attention. But shortly after that time she felt a burning and itching sensation about the genitals, which was soon followed by a tumefaction of the labia majora. The doctor found, on examination, broad condylomata of the labia and around the anus, roseola syphilitica, angina syphilitica, and indurated glands of the inguinal and cervical region. The husband had broad condylomata upon the penis and scrotum, but as yet no sign of universal lues; he admitted having had sexual intercourse with his wife five weeks after her confinement. The baby was perfectly healthy; the most scrupulous examinations could not detect anything suspicious. The woman showing the general signs while her husband had the initial symptoms of syphilis, she must have contracted the disease first. The doctor suspecting the midwife, found her affected with broad condylomata and induration of the glands; he further ascertained that she, after attending a syphilitic woman, had an ulcerated finger; that this ulcer was not entirely healed when she attended the above lady; and that another lady whom she had attended at about the same time had since then showed signs of syphilis.

3. *Suspected Vaccinal Syphilis.* GUERIN. (*L'Union Médicale*, November 23, 1876.)

Guérin presented to the Paris Academy of Medicine a little patient who had been vaccinated nine days after birth—seven weeks prior to date. The immediate results of the vaccination had been quite normal, the vesicopustules becoming well developed. On the eighth day the virus from the latter had been employed in the vaccination of an elder brother, in whose case the evolution of the disease and the subsequent cicatrization had been entirely regular.

In the case of the first child, however, deep ulceration had occurred at the three sites of inoculation, with indurated edges, quite analogous to that found in indurated chancre; but the corresponding lymphatic ganglia were not engorged. On the same arm, however, was a perfectly cicatrized periostosis. The difficulty was pointed out of establishing the influence of syphilis in a case which displayed tertiary symptoms after a few weeks, without the occurrence of symptoms intermediate between it and the primary lesion. The reporter consequently assumed the phenomena to be manifestations of the strumous diathesis in an infant vaccinated very early after birth; others who observed the child being inclined to adopt the same opinion.

4. *Communication of Syphilis by Milk.* VOSS. (*Petersburg Med. Wochenschrift*, No. 23, 1876.)

Three prostitutes were inoculated with the milk of a woman affected with papular syphilis, who suffered also from moist mucous papules of the anal and genital regions—the mammary glands being free from disease. A syringeful of milk, expressed from one breast, was injected into the tissues of each prostitute by means of a Pravaz syringe. One who had been previously syphilitic, suffered no inconvenience; the second had

urethritis, and was not affected; the third was a young girl sixteen years old, free from syphilis, who was injected on the eleventh day after her admission to the hospital. The inflammation and local suppuration excited, subsided in one week; but forty days after the inoculation papules were developed around the site of the injection, and in five days a maculopapular syphilide appeared over the body, with concomitant adenopathy — these symptoms disappearing after the employment of mercurial inunction.

5. *The Tincture of Tayuya in Syphilis.* LONGHI. (*Gazz. Med. Italiana-Lombardia*, November 25, 1876.)

The third observation of the author concerned the case of a child three months old, who had been suckled by a nurse after the latter had been infected with syphilis by a former nursing. The infant exhibited over the groins and external genitalia, ten or twelve papules, of the size of large peas, rounded in contour, and covered with a whitish offensive secretion — these lesions being implanted upon an integument which was considerably reddened. Upon the lips of the mouth were several small whitish ulcers with reddened borders. Similar sores were also found upon the tongue. The diagnosis was made of papular syphilis of the genitals and mouth. Three teaspoonfuls daily were given of a solution containing one hundred and fifty drops of the dilute tincture of tayuya (Ubicini Brothers') in eight hundred grammes of water. The parts were bathed three or four times daily in the same solution. In a fortnight the cure was complete, the author expressing a regret that he could not have tested the treatment further, and made continued observation of the case.

The fourth case of the series is that of a patient thirty-six years old, who had had repeated attacks of gonorrhœa, and a gleet discharge for fifteen years. During this period he had suffered frequently from articular and muscular pains, which were accompanied by swellings upon the manubrium of the sternum, the occipital and parietal bones, the dorsal vertebrae and ribs. There had been also copper-colored blotches of the surface — one upon the left pectoral region being as large as the hand of an adult. He had vainly tried many kinds of empirical treatment, not neglecting the use of mercury, iodine, hot baths, etc. On the first of September he could hardly move in bed; the lateral movements of the neck were evidently accomplished only with difficulty, and all sudden motions (sneezing, coughing, etc.,) were excessively painful. The bones were enlarged, as described above; while the eruption and gleet discharge observed did not seem of recent development. A diagnosis was established of macular syphilide, with syphilitic periostitis and arthritis. For several preceding months the patient had taken no medicine; but in July he had been subjected to a hydrotherapy, which left him in a more unfavorable condition than at first. On the 12th of September the treatment by tayuya was begun, in doses of fifteen drops of the dilute tincture in two hundred grammes of water. In five days the patient could tolerate forty drops in the same quantity, which were continued till September 20th. On that day he took

eighteen drops of the mother tincture, increased to forty of the same by October 1st, then slight abdominal pain was complained of, when but thirty-five drops of the strong tincture were ordered to be employed. The patient had now for several days stated that his pains were not one-fifth of what they were formerly; the osseous enlargements had well nigh disappeared, and also the cutaneous maculæ, with the exception of that upon the breast, which was smaller by two-thirds than at the beginning of treatment; the gleet had completely disappeared. Some recurrence of pain occurred after drinking half a litre of wine with his companions, when the dose was again increased to forty drops. On October 5th, the commercial tincture was substituted for that employed, in eighty drops daily (the mother tincture being exhausted), and the latter dose gradually reduced to fifty drops by November 10th, the date of the writer's last observation. All the osseous enlargements have disappeared; but the pectoral macule is still visible, and the pain only appears for a day after drinking wine, becoming constipated, or on exposure to the cold.

6. *The Hypodermic Treatment of Syphilis.* NEUMANN. [Mémorial presented to the Imperial Academy of Medicine, Vienna.] (*Anales de Ciencias Méd.*, November 20.)

After a brief historical sketch of this mode of treatment, Neumann proceeded to show the value of injections made with the albuminate of mercury. The advantages claimed were, that there is the least degree of reaction, and no abscesses nor gangrene follow. Under any circumstances before absorption of mercury can occur, it must be united with albuminous substances—precisely what occurs when the mineral is taken into the stomach. Bamberger's solution (of the albuminate of mercury), however, contains the sublimate already combined with albuminoid substance, and hence it enters the tissues of the body without requiring further transformation. It is thus readily absorbed, and the tissues of the body are not altered by its admission. Therefore it is especially useful when speedy effects are desired, as its operation is more rapid than that of the protiodid and corrosive sublimate when administered by the mouth. Besides, the number of injections can be readily regulated, the dosage is completely under the control of the operator, and the stomach and bowels are left undisturbed and unirritated. Stomatitis also is rare. The disadvantages which have been claimed by certain authors, viz.: elevation of the temperature, increase in the frequency of the pulse, colliquative diarrhoea, formation of abscesses, etc., have not resulted, in Neumann's experience, from the employment of Bamberger's solution.

ANNOUNCEMENTS FOR THE MONTH.

MONDAYS. SOCIETIES.

Mondays, Jan. 1 and 5.—Chicago Medical Society. Regular meetings.
Mondays, Jan. 8 and 22.—Chicago Soc. of Phys. and Surgeons. Regular meetings.

CLINICS. Every Monday.

At Eye and Ear Infirmary, 2 P. M.—Prof. Holmes.
 At Central Dispensary (Wood and Harrison sts.)—2 P. M. *Gynecological*, Dr. Adolphus;
 3 P. M. *Diseases of Children*, Dr. R. S. Hall.
 At Mercy Hospital—2 P. M., *Surgical*, Prof. Andrews.
 At Rush College—2½ P. M., *Medical*, Dr. Bridge.
 At Chicago College, 2 P. M. *Gynecological*—Prof. Merriman.

LECTURES. Every Monday.

At Rush Medical College (Harrison and Wood sts.)—9¼ to 12½ o'clock, Profs. Freer, Lyman and Powell; 4 to 6, Profs. Gunn and Haines. At Chicago College—8¼ to 12¼, Profs. Jewell, Hyde, Hatfield and Bond; 3 to 6, Profs. Nelson and Davis, Quine and Andrews, and Roler. At Woman's College—8¼ to 11¼, Profs. Hotz, Marguerat and Earle; 3 to 5, Profs. Paoli and Stevenson.

TUESDAYS. SOCIETIES.

Tuesday, Jan. 9.—Academy of Science. Regular meeting at 8 P. M. (363 Wabash av.)

CLINICS. Every Tuesday.

At Eye and Ear Infirmary—2 P. M., Prof. Jones.
 At County Hospital—2 P. M., *Medical*, Prof. Ross. 3 P. M., *Surgical*, Prof. Bogue.
 At Mercy Hospital—2 P. M., *Medical*, Prof. Hollister.
 At Chicago College—2 P. M., *Gynecological*, Prof. Roler.
 At Central Dispensary—2, *Surgical*, Dr. Graham.

LECTURES. Every Tuesday.

At Rush College—9¼ to 12¼, Profs. Miller, Allen and Parkes; 4 to 6, Profs. Gunn and Haines. At Chicago College—8¼ to 12¼, Profs. Jewell, Quine, Merriman and Bond; 3 to 6, Profs. Johnson and Nelson, Andrews and Hatfield, and Byford. At Woman's College—9 to 12, Profs. Bartlett, Curtis and Fitch; 3 and 5, Profs. Hayes and Macdonald.

WEDNESDAYS. CLINICS. Every Wednesday.

At Eye and Ear Infirmary—2 P. M., Prof. Holmes. [Montgomery].
 At County Hospital—2 P. M., *Gynecological*, Prof. Fitch; 2 P. M., *Ophthalmological*, Dr.
 At Chicago College—2 P. M., *Gynecological*, Prof. Nelson.
 At Mercy Hospital—2 P. M., *Ophthalmological*, Prof. Jones.
 At Central Dispensary—3 P. M., *Dermatological*, Dr. Maynard.

LECTURES. Every Wednesday.

At Rush College—9¼ to 12¼, Profs. Freer, Allen and Parkes; 4 to 6, Profs. Etheridge and Haines. At Chicago College—8¼ to 12¼, Profs. Hyde, Isham, Hatfield and Bond; 3 to 6, Profs. Davis and Curtis, Quine and Jones, and Roler. At Woman's College—8:30 to 12, Profs. Marguerat, Hotz and Blake; 3 to 6, Paoli, Graham and Stevenson.

THURSDAYS. CLINICS. Every Thursday.

At Eye and Ear Infirmary—2 P. M., Prof. Hotz.
 At Mercy Hospital—2 P. M., *Medical*, Prof. Davis. [tem, Prof. Lyman].
 At Rush College—2 P. M., *Medical*, Prof. Ross; 3 P. M., *Diseases of the Nervous Sys-*
 At Chicago College—2 P. M., *Gynecological*, Prof. Merriman.
 At Central Dispensary—2 P. M., *Surgical*, Dr. Graham.

LECTURES. Every Thursday.

At Rush College—9¼ to 12¼, Profs. Miller, Allen and Parkes; 4 to 6, Profs. Gunn and Etheridge. At Chicago College—8¼ to 12¼, Profs. Hollister, Isham, Merriman and Bond; 3 to 6, Profs. Johnson and Nelson, Andrews and Hatfield, and Byford. At Woman's College—9 to 12, Profs. Bartlett, Curtis and Fitch; 4 to 6, Profs. Macdonald and Thompson.

FRIDAYS. SOCIETIES.

Friday, Jan. 12.—State Microscopical Society of Illinois. Regular meeting, 8 P. M.

CLINICS. Every Friday.

At County Hospital—2 P. M., *Medical*, Prof. Ross; 3 P. M., *Surgical*, Prof. Bogue.
 At Mercy Hospital—2 P. M., *Medical*, Prof. Davis.
 At Chicago College—2 P. M., *Gynecological*, Prof. Roler. [dren, Dr. R. S. Hall].
 At Central Dispensary—2 P. M., *Gynecological*, Dr. Adolphus; 3 P. M., *Diseases of Chil-*

LECTURES. Every Friday.

At Rush College—9¼ to 12¼, Profs. Freer, Allen and Parkes; 4 to 6, Profs. Gunn and Holmes. At Chicago College—8¼ to 12¼, Profs. Hollister, Isham, Hatfield and Bond; 3 to 6, Profs. Davis and Curtis, Jones and Quine, and Roler. At Woman's College—9 to 12, Profs. Dyas, Marguerat and Earle; 3 to 5, Prof. Hayes; 5, Prof. Stevenson.

SATURDAYS. CLINICS. Every Saturday.

At Chicago College—2 P. M., *Surgical*, Prof. Andrews or Isham; *Gynecological*, Prof. Nelson; 3 P. M., *Medical*, Prof. Johnson.
 At Rush College—2 P. M., *Surgical*, Prof. Gunn.

LECTURES. Every Saturday.

At Rush College—8¼ to 12¼, Profs. Lyman, Miller, Etheridge and Parks. At Chicago College, 8¼ to 11½, Profs. Hollister, Quine and Hyde; 3 to 6, Profs. Nelson and Johnson, Andrews and Quine and Byford. At Woman's College—9 to 11, Profs. Bartlett, Earle and Fitch; 3 and 5, Profs. Paoli, Thompson and Macdonald.

At all the above named Clinics visiting regular practitioners are, we believe, admitted.
 At the South Side Dispensary (Chicago College) there are six daily special Clinics, for sections of the classes of the Chicago College.